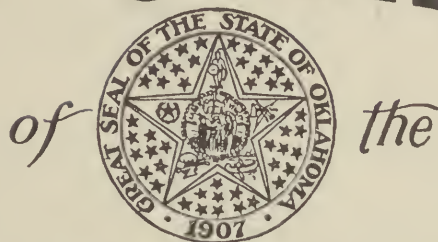


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HYPERTONIA VASORUM CEREBRI*

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It has been seven years since the first publication of my paper on this subject, "Hypertonia Vasorum Cerebri."** During this time many new theories have been advanced in regard to the etiology of diseases of the cerebral arteries. The improvement of methods for the study of arterial disease has been decidedly marked.

The mortality rate from diseased cerebral vessels is steadily increasing. This increase is general throughout the United States and is, apparently, unaffected by climatic conditions, locality, or density of population. The correlated conditions, heart, and chronic Bright's disease, show a corresponding increase in the mortality. The general death rate is steadily increasing. It is altogether fitting that I again discuss the subject in the light of our present knowledge.

Hypertonia vasorum cerebri means, essentially, hypertension of the blood vessels of the brain. It is not my purpose to dwell upon blood-pressure as found in normal man, as this subject has been carefully and forcefully presented by Drs. Krehl, Cushing, Marey, Russell, Howell, Janeway and other eminent investigators. I shall deal with pathological conditions ascribed to hypertension of the cerebral vessels: etiology, pathology, symptoms, diagnosis and treatment.

The commonly accepted cause of cerebral affections can not be held responsible for the increased death rate without further study of their etiology. The etiological factors encompass ethnological, biological and pathological problems. These cannot be treated at length in this paper.

The continual evolution in our social life tends to overtax the system of men both physically and mentally. Commercial life is at a higher degree of development than at any time in the world's history. The wheels of mighty industries and progressive governments must be kept turning to maintain this high standard. The nucleus of all this activity is the human organism. It labors night and day to uphold the abstract while the concrete form is gradually sapped of its being.

These conditions slowly evolve biological, pathological and ethnological change. The effect produced by high-strung nervous tension induced by modern methods of social and business competition must be regarded as a causative factor in the production of functional and ultimately organic diseases of the cerebral vessels.

*Read in Section on General Medicine, Nervous and Mental Diseases, Bartlesville, May, 1915.

**American Medicine, July, 1908.

The etiological factors bearing exclusively upon hypertension may be classified, according to Janeway, as functional, relatively referred to as (a) physiological, pharmacological, toxic and (b) acute cerebral compression and anemia. I would suggest the addition of the *psychological* factor to the above classification, because of its meaning and importance in hypertonia.

The factors in essential hypertension are (a) arteriosclerosis, (b) renal disease, (c) angio-sclerosis, and (d) disturbances of the chromaffin system.

Any transitory cause producing on the vascular system increased blood-pressure may be spoken of as functional hypertension. The increase of tension due to excessive mental activity or physical exertion, as found in forcible inspiration in normal man, are physiological acts which force a large amount of blood to the heart and brain. Increase in the viscosity of the blood impedes the circulation of the blood through the capillaries (Russell), and hence high tension. Acute gastric and intestinal pain may cause hypertension (Curschmann.) Nicotine, alcohol, ergot, adrenalin, pituitrin, hydrastine hydrochlorate and stypticin are among the drugs which cause increase in blood-pressure. Nicotine (and pyridine) is one of the most destructive agencies to constructive metabolism in the arteries of the brain and should be ranked with alcohol. Toxic factors are found in eclampsia (H. Vasquez), gout, alimentary intoxication, bacteremias and uremia. Psychical hypertension of great intensity is seen in fright, anger, sudden joy and great sorrow.

Extreme high tension may accompany acute compression of the brain in fracture of the base of the skull, and in apoplexy. Acute cerebral anemia produces the same symptoms as cerebral compression, hence, high tension.

Obstruction of the cerebral sinuses and veins may be due to pressure on the innominate or jugular veins, by a tumor or aneurysm, to suffocation and strangling, to excessive strain, to tricuspid insufficiency, to embolism, to thrombosis, to arterial and venous degeneration, to ulceration, to abscess, and to hemorrhage. Weinburger observed in the case of a gardener of 36, an aneurysm and rupture of the vessels, and the basal arteries and aorta were sound. An abscess due to mycotic embolism may result in an aneurysm or rupture of the vessel.

The causative factors in essential or permanent hypertension, according to some investigators, are due to a damaged regulating power of the visceral circulation. This high level of blood-pressure must be met by the mechanical complexity of automatic principles and so is maintained by the hypertrophy of the left ventricle. Some writers (Hasenfeld, Hirsch, and Janeway) assert that hypertrophy of the left ventricle is due to arteriosclerosis only when there is disease of the splanchnic arteries, or in the aorta above the diaphragm. Thus they exclude all other parts of the vascular system.

The hypertension of renal disease is a marked condition, concerning which many theories have been advanced. Bright, in 1836, first associated lesions of the kidney with a hypertrophied heart. He thought the causative agent to be irritants in the blood stimulating the heart abnormally, or increasing the resistance of arteries and capillaries. Schlayer relates observations in this line, stating: "There is no relation between hypertension of nephritis and the functioning of the suprarenals."

The hypotheses of Bright and other observers (Traube, Johnson, Gull and Sutton, Cohnheim) all have the essence of truth as deduced from clinical evidence. The cold facts presented to us resolve the etiology of cardiac hypertrophy and renal disease into mechanical processes and pathological sequences.

In a given case of irritation of the vascular supply of the kidneys, we have, at first, hyperemia, and such being the case, faulty elimination of waste products and blood overloaded with toxins; then intensified inflammation of the kidneys, increased amount of blood through ingestion (as the persistent imbibing of large quantities of beer), vaso-motor spasm, high arterial tension, chronic inflammation,

sclerosis, heart exertion and hypertrophy follow. Janeway claims: "Increased resistance and diminished splanchnic compensation are essential hypotheses for the comprehension of arterial tension in the light of present knowledge, whatever the source of the irritant which provokes them." The splanchnic circulation may cover a multitude of sins, but, in my opinion, not that of arterial tension in its entirety.

The production of nephritic types in the rabbit and dog by injections of turpentine, phenol, lead, mercury and other irritants, or to exposure to cold, elucidates step by step the pathological alterations in the kidney structure. I have observed the clinical course in the human organism simulate that of the dog and rabbit so closely that I am forced to believe my hypotheses correct.

I am convinced of the great influence of the nervous supply upon the vascular system as a whole, or in part. Bishop believes that the cause of hypertonia vasorum is of nervous origin. Sclerosis or angio-sclerosis seems to me to be due to failure of the vessels to compensate for the increased work induced by etiological factors. Thus we should recognize this most important factor in sclerotic arteries, as well as in other pathological conditions in any part of the vascular system.

I shall not confine myself further to the causative agencies of hypertension of the whole vascular system, but to symptoms, and the effects of vascular hypertension on the brain. The symptoms of irritation are: Oppressive headache, which is sometimes pulsating and aggravated by physical and mental effort, the sign of painful thought (Josue), vertigo, irritability, rapid pulse, epistaxis, restlessness, insomnia, and nervous phenomena, as flashes of light, hyperacusis, transient tingling or heaviness of arms or legs, sometimes intense, persistent neuralgias, and convulsive movements.

The depressive symptoms are manifested by the obtunding of the senses. The anemia of the brain may be sudden, with pallor, weakness, vertigo, headache, flashes of light, subjective noises, rapid respiration, cool skin, and, in extreme cases, coma, convulsions and death. If the onset is slow, there is somnolence, dullness, apathy, insomnia, headache, vertigo, tinnitus aurium, and muscae volitantes.

An attack of apoplexy may be sudden with unconsciousness, conjugate deviation, loss of motor power, loss of sensation and, perhaps, coma and death. Possibly headache, depression, choreaform movements, more or less paresthesia, may precede the attack.

The general symptoms may begin with a feeling of fullness in the neck and temples, due to hypertension of the cerebral blood-vessels. Tremor is present in a goodly number of cases.

The temporal and occipital headaches are generally the result of spasm, of locally affected or diseased vessels, and are not of absolute diagnostic value, but should be carefully noted in their association with other factors.

Vertigo is due to disturbed cranial circulation. Slight or spasmodic dyspnea, following errors of diet, is an important sign. Flashes of light, restlessness, insomnia, convulsive movements and irritability, are the result of the action of the hypertonic vessels on cerebro-cellular repose. Depression or obtunding of the senses is due to anemia of the part, or pressure acting on the convolutions, which, when intensified, produces unconsciousness.

Generally, if the patient has not been under the care of an observant physician, he is not aware of any serious condition. He goes about his usual vocation until he is suddenly stricken, without warning; but some of the above symptoms may have preceded the attack.

The sequence of the condition may be cerebral hemorrhage and its results, aneurysm, embolism, thrombosis, encephalitis, anemia from pressure, edema, hyperemia, artery block and death, prolonged or sudden.

The course and termination of hypertonia of the cerebral vessels is inevitably governed by the gravity of the disease and accuracy of the treatment.

To distinguish hypertension of the cerebral vessels from other conditions is, at times, quite difficult. It differs from acute alcoholism insofar as there is no pressure symptoms or organic brain involvement. Opium poisoning is readily recognized by the pinpoint pupil, slow pulse and respiration. Uremia is generally cleared up by the history of the case. Syncope is a symptom of circulatory failure and the duration of unconsciousness short. Cerebral embolism, apoplexy (a name that is applied to anything which produces a certain line of symptoms), thrombosis, aneurysm and artery block, and the sequences of, or associated with, hypertension of the cerebral vessels, and confront us with one of the most difficult problems found in the diagnostics of internal medicine. The greatest importance attaches to correct diagnosis, for without it we are void of any accurate plan of treatment.

Artery block, a momentous condition in the study of hypertonia, may account for the source of a great deal of error in diagnosis. Many thousand sudden deaths occur yearly which are erroneously imputed to heart, brain or kidney disease; but, in fact, are pure and simple cases of artery block.

The post-mortem examination reveals no lesion of the above named organs other than the condition of the vessels as the result of the block. The block may be due to an active or passive hypertonic state of the cerebral vessels:

Active, such as increased cardiac action, excessive ingestion of food or drink; acute alcoholism; general plethora; sunstroke; prolonged mental exertion; diminished blood supply to other parts of the body resulting from ligation of a large artery, or disturbance of the splanchnic circulation.

Passive, due to dilatation of the right heart, or pressure on the veins returning the cerebral flow of blood.

Spasms of the cerebral vessels, which may be toxic, tonic or clonic, produce artery block and its possible sequences—aneurysm, apoplexy, thrombosis, embolism or capillary hemorrhage, any of which may cause death.

I have long held the hypothesis that epilepsy is the sequel of an angio-neurotic arterio-stenosis, or disturbance of the circulation of the convolutions, producing in accordance with the intensity of the spasm, *le petit mal* or *le grand mal*. The foregoing hypothesis is not founded upon mere supposition, but upon clinical evidence presented by 184 cases cured by the regulation of the circulation. L. Clark, in "The Lancet," London, attributes epileptoid attacks in tachycardia and bradycardia to withheld nutrition of the brain, without reference to the sudden change in the blood-pressure in the cerebral vessels.

In support of this theory, he cites Langerdorf's experiments in 1878. I think that recent experiments tend to show plainly the relation of artery block to epilepsy.

The use of the sphygmomanometer (Riva Rocci or Modification) is of immense practical value, for on its use great issues often depend. All systolic and diastolic determinations should be made with the patient in the recumbant position. The pulse stability should be carefully measured. Tactile estimation of blood-pressure should be made of every accessible artery. The peripheral and venous circulation should be especially noted. The tympanic membrane will often times show incipient signs of high tension.

The ophthalmoscope should ever be kept in mind, as the eye frequently presents the first proof of hypertension of the cerebral vessels. Jackson asserts that the members of the medical profession at large do not appreciate the use of the ophthalmoscope in studying vascular lesions of the retina. With this statement I heartily agree. Several observers (Benson, Harbridge, de Schweinitz, Zetmayer) have reported cases of transient blindness during which the retinal artery was temporarily empty, soon refilling and becoming normal in appearance.

I have, in another part of this paper, mentioned the occurrence of spasms of the arteries causing complete loss of function for a time. In this retinal picture of arterio-spasm, we have the explanation of visual and sensory disturbances, and other important pathological conditions. A distinct homonymous defect may be the first evidence of organic disease. I will state further in the way of delineation that the ophthalmic artery coming from the carotid within the skull, and orbital veins emptying into the cavernous sinuses, disease or injury, within the cranial cavity, is often manifest chiefly through disturbances of the circulation within the orbit.

The prognosis in mild cases, uncomplicated with kidney, heart or arterial disease, is good. Simon's case exemplifies that recovery is possible in the case of red granular kidney when blood-pressure is reduced. Severe cases arising from the disease of the heart, arteries or kidneys, may terminate favorably, provided proper treatment is instituted early, otherwise the prognosis is grave.

The *treatment of hypertension of the cerebral vessels* includes, in part, the whole vascular system, but should be governed mainly by the etiological factors.

The medical profession has before it an opportunity of great vital moment in teaching the doctrine of right living, advocating a saner and more wholesome attitude toward life and standing as a unit against false standards of material gain and advancement obtained by the sacrifice of normal, healthful and peaceful attributes of calm mental poise, equable temperament and physical well-being (Darlington).

Such conditions begin to change the ethnological field. The instillation of new blood, or the intermingling of races, is prerequisite to the building up of a people suffering from physical and mental degeneracy. The study of structure, life, growth and action of the human organism under various conditions give us an insight to the highest as well as the lowest possibilities of man.

I believe, were it not for the continual instillation of domestic and foreign peasant blood into our commercial and professional life, that in one hundred years our truly Americans would become extinct, due to heart and arterial disease.

The diet is one of the paramount factors in the treatment of diseases of cerebral vessels. All meat should be excluded, at least until the disease is mitigated. A vegetable diet should be adhered to almost exclusively, allowing moderate amounts of carbohydrates. The quantity of liquids must be restricted to distilled or mildly alkaline waters, whey, sour, skim or butter-milk. *Whey* and *sour milk* are the most salutary articles of diet which we have at our command in the treatment of blood-pressure diseases. Tea, coffee and alcoholics should be absolutely avoided. The amount of condiments should be reduced to a minimum, and especial stress placed upon salt. *Tobacco in any form is particularly deleterious in all cases of high tension.*

Whatever the cause of high tension may be, complete mental and physical rest should be enforced, at least until there is marked improvement. The periods of absolute rest may vary from two or three times a week, or until the usual routine may be again resumed. When allowable, moderate, systemic exercise should be taken before meals. Massage is beneficial when properly applied; it stimulates peripheral circulation and promotes waste elimination. Tepid baths in a warm room followed by a brisk rub with a rough towel aid in stimulating the peripheral circulation. The Schott method is admirably adapted to this class of diseases.

Electricity may be used, and in some cases has given very good results. Electric light has a salutary effect on the peripheral vessels. Vibration has a tendency toward vasomotor dilatation, and is especially active upon the splanchnic circulation.

In many cases, unless there is reason to suspect immediate danger, I begin treatment by the administration of calomel, 2 grains at bedtime, and a Seidlitz powder before breakfast. This I continue for a week, and repeat at such times as

I deem necessary. Potassium iodide, 3 grains, is given three times daily, after meals, and gradually increased to physiological effect, and then reduced to 5 grains combined with 3 gts. Fowler's solution, given three times daily after meals. This reduces the viscosity and has an antidotal effect on certain irritants in the blood.

The potassium element is highly irritant to kidney tissue and it is not advisable to continue its use for any great length of time. I have had patients, however, whose condition improved much better on potassium iodide than on sodium iodide, which, no doubt, was due to a special selection for certain irritants in the blood. Biniodide of mercury, 1-20 grain three times daily, acts well in some cases, especially if there is a luetic history. Nitroglycerine is a powerful and a reliable drug in hypertension. It should be administered on the tongue in 1-250 grain doses every 30 minutes until tension is lowered; then three or four times daily. Aconite, in four-drop doses, three or four times daily, is valuable, but will not admit of continued use. Sodium nitrite is beneficial. The theobromin and caffeine group of diuretics can be efficiently used, or supplemented by digitalis, squills, potassium citrate, apocyanum, and jalap, as indicated. I advise all my patients who may be subject to hypertonia to carry 3 gtt. pearls of amyl nitrate to be used in an emergency. Erythrol tetranitrite is a drug of immense practical value. The dose is 1-2 to 1 grain. The dose should be small and frequently repeated.

Focal anemia, which may be mistaken for a hemorrhage, calls for the administration of belladonna and its alkaloid, atropine, or stramonium, or valerian. Feeble circulation, and a tendency to slight hypertonic contraction, requires the administration of a pill containing iron and digitalis, and a mixture of spirit nitrous ether in each dose. When the radials are slightly hypertonic, pulse feeble and heart sounds faint, liquor strychninae and tincture of squill are indicated. In a pseudo-hemiplegia with a pulse of 60 to 70, artery somewhat thickened, blood-pressure 160-170 (Oliver), one-half grain of erythrol tetranitrate, digitalis 5 minims, suitable doses of potassium iodide, three times daily. After one week stop the erythrol and continue potassium iodide with 5 minims liquor strychninae hydrochloridi, three times daily.

Recurring mental or motor phenomena due to cerebral arterial disease in the aged calls for potassium iodide for hypertonia. Paralydehde and low diet are also indicated. Insomnia may be treated by sulphnol, trional, veronal or phenacetin.

The value of venesection in hypertension has been fully discussed in my papers on "Venesection; Its Therapeutic Value," published January, 1907* and "Blood-Pressure in the Practice of Medicine," published April, 1908**.

Kottman has confirmed my investigations concerning the effect of venesection on the viscosity of the blood. He states that venesection reduces the viscosity of the blood which may last for 21 days. In some of my cases, the attenuated viscosity lasted for 45 days. Venesection scientifically applied is a most valuable agent in the treatment of high blood-pressure. The establishment of collateral circulation for the relief of high tension should not be forgotten.

I have tried to suggest the enormous importance of these vascular conditions of the brain that are so frequently encountered, and that may be so readily studied by those who have a working knowledge of the heart and arterial system, and are accustomed to the use of apparatus for measuring blood-pressure.

The usual arrangement of the subject matter has been somewhat departed from, though I have given a description of hypertonia with the intention of providing one a complete picture of the condition. In my opinion, the arrangement facilitates a clearer comprehension of the subject, since it outlines, in full, and avoids repetitions and complications.

*American Jour. Clin. Medicine.

**Medical Record.

It may be the height of folly to deviate from the beaten path of conservatism in the endeavor to inaugurate a new name for a condition that includes a multitude of symptoms which have, heretofore, been designated as distinct diseases. The additions to medical literature are great, and any syndrome calls forth a new disease and, necessarily, a large medical name, until we have nomenclature *ad finitum*. Often, when we look into conditions fairly and squarely, we find a symptom and not a disease. It may be argued that it is a difficult matter so to do, but we are aware of many so-called diseases that may be classified with their variable phenomena under one head. In so doing we save time and labor, curtail nomenclature and are enabled to concentrate our mind and energy on the conditions of essential importance. Thus the physician will be enabled to scientifically treat his patients, empiricism in blood pressure disease will be ancient history, and therapeutic accuracy a certainty of the present.

THE SPHYGMOMANOMETER*

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I was induced to select "The Sphygmomanometer" as the subject of this paper from the fact that I do not believe the general practitioner places a proper estimate upon the value of the blood pressure test, or is in the habit of applying it as frequently as he should in his daily practice.

The object of this paper is to briefly call your attention to the importance of the sphygmomanometer as a means of diagnosis and prognosis. I shall not attempt to enter into the entire field of usefulness of the sphygmomanometer since it would require a good sized text-book for that purpose, but merely desire, in a general way, to direct your attention to some of the most significant facts pertaining to its use by the general practitioner.

It is only within the past five years that the use of the sphygmomanometer has become general. It now occupies a position along with the clinical thermometer and the stethoscope. Practically all the life insurance companies now require the blood pressure taken either as a routine or under certain conditions. They have collected a series of mortality statistics showing a much higher death rate in applicants with a moderate increase of blood pressure, even where no other evidence of disease exists. The value of the blood pressure test to the physician is based entirely upon the fact that the physician is unable to properly estimate the tension of the blood within the arteries by the tactile sense of the finger. The normal blood pressure of a male adult, at the age of twenty, is one hundred and twenty; of the female of the same age, it is approximately one hundred and twelve. The blood pressure gradually increases with age at the rate of one millimeter of mercury to every two years advance in age. With the blood pressure at two hundred, there is always albumen in the urine, the high pressure causing the albumen to filter through the kidneys. In any chronic disease with the blood pressure at two hundred, the physician may safely predict death within two years. In every stage and type of nephritis, there is a high blood pressure.

Arteriosclerosis is a disease in which there is a moderate increase in the blood pressure and the early use of the sphygmomanometer in this condition will enable the physician to make a diagnosis of this disease before hardening of the arteries takes place, and thus enable him to make the changes in diet and habits of the individual in time to prolong life several years.

Typhoid fever is one acute infectious diseases in which the sphygmomanometer should be used daily. There is a gradually falling blood pressure in this disease after the first week, the blood pressure usually falling below one hundred and remaining below this point until convalescence is established. By the use of the sphygmomanometer in this disease, the physician will be able to make a differ-

*Read before Sequoyah County Medical Society, June 1, 1915.

ential diagnosis between perforation of the bowel and intestinal hemorrhage. In perforation of the bowel there is a slight rise in blood pressure for a few hours, followed by a fall in blood pressure. In hemorrhage of the bowel there is a sudden and immediate drop in blood pressure in proportion to the extent of the hemorrhage.

Pneumonia is another acute disease in which sphygmomanometer should be applied daily as a means of prognosis. There is not much change in the disease in the blood pressure so long as the patient is progressing favorably. In a series of cases of pneumonia, in which the systolic pressure kept above the pulse rate there was not a single death, while in fifteen cases in which the blood pressure fell below the pulse rate, there was only one recovery. A falling blood pressure in pneumonia is an exceedingly grave condition and when it falls to, or below the pulse rate, it would not only cause the physician to expect an unfavorable termination of the disease by cardiac failure, but would also be the first indication for the administration of powerful heart stimulants.

Pulmonary tuberculosis is a slow, wasting disease in which there is a falling blood pressure as the disease progresses. The use of the sphygmomanometer is not significant in this disease except to indicate the degree of exhaustion. Any improvement in this disease is accompanied by a rise of blood pressure.

It has been stated by good authority that a low blood pressure in an otherwise healthy subject should lead the physician to suspect tuberculosis.

In obstetric practice the blood pressure test is equal to, if not superior to urinalysis. A urinalysis in pregnancy will show nephritis with albumen in the urine, but it takes a blood pressure test to determine the seriousness of the toxemia resulting from nephritis.

Doctor Hirst, one of the leading obstetricians of this country, states that the earliest and most constant sign of toxemia in the latter months of pregnancy is the high and constantly rising blood pressure, and this symptom precedes albuminuria and all the constitutional signs of an impending eclamptic attack. There is usually slight rise in the blood pressure of a pregnant woman at the latter end of pregnancy, but so long as the pressure remains below one hundred and twenty-five it may be disregarded. The authority just quoted also states that as far as possible to lay down any rules in these cases, we may say that a blood pressure of one hundred and twenty-five to one hundred and fifty needs careful watching and moderate eliminative treatment, and that a pressure of over one hundred and fifty needs, usually, active eliminative treatment and will, in all probability, especially if it shows a tendency to climb higher, require the induction of premature labor.

As an illustration of the personal use of the sphygmomanometer, I will call to your attention the following case: I was called to see a primipara, age eighteen, advanced to the seventh month of pregnancy and suffering from a terrific headache, nausea, extreme nervousness, etc. The symptoms caused me to suspect toxemia with a probable impending attack of eclampsia. I was unable, at this visit, to secure a sample of the urine, and administered a hypodermic of morphine and hyosein for relief. In about four hours her husband reported her to have some headache with nausea and restlessness. I made another visit and applied the sphygmomanometer to determine the character of the symptoms and was very much relieved to find the systolic pressure only one hundred and ten. The case went on to full term with a normal delivery.

In surgery the application of the sphygmomanometer is rapidly gaining ground. Some of the most prominent surgeons in the country require a blood pressure record kept during any important operation, claiming this to be a more accurate guide to the condition of the circulation than the pulse rate and respiration.

This paper contains no details as to the application of the sphygmomanometer, my only aim being to call your attention to some of the most important and frequent diseases and conditions in which its use has proven of value.

ACTINOMYCOSIS*

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A case of actinomycosis having recently come to my office, I found my knowledge of the subject rather hazy and, in discussing it with some of my colleagues, I found them in like condition, many of the older men never having seen a case. While studying the case I became much interested and hope that a brief discussion of the disease will interest you, since about 50 per cent. of the infections are in our field.

Senn defines it as a form of chronic inflammation caused by the presence of actinomyces or ray fungus. Before degeneration the lesion resembles a tumor and is often taken for sarcoma. Under the microscope it is difficult to distinguish from round celled sarcoma. The presence of the ray fungus is necessary to settle the diagnosis.

Actinomycosis is found in almost every country, generally in isolated cases, but has occurred as an epidemic.

The ray fungus constitutes a group in which are many varieties, being either pathogenic or non-pathogenic. The actinomyces is the pathogenic type of ray fungus. They are visible to the naked eye as yellow, white, brown or green masses, but must be spread out under the microscope for the detail of the fungus; they then appear as rods with round expanding ends. The culture of the fungus has proven a difficult task, but it is generally grown on glycerin-agar.

Any portion of the fungus seems as effective as the whole fungus for inoculation. Some authorities claim that the fungus has been isolated from air, water, vegetable matter and soil, also from the chaff of grain, and that the infection of both man and animal comes from the same source.

Jensen traced an epidemic in Zealand from rye grown on land recently reclaimed from the sea. Johne discovered actinomyces in grains of rye lodged in the tonsil of a pig.

Infection in man usually takes place through the tonsil, carious teeth, punctured wounds, by inhalation or by ingestion of food containing the fungus in an active state.

When the fungus enters the tissue it produces an inflammation which develops into a mass of granulation tissue with the fungus in its midst.

Most pathologists claim that the fungus is not pus forming and that the pus when it does appear comes from a separate infection of the granulation tissue, thus explaining why some of the actinomycotic infections seem so slow and benign, while those that have become infected with pus are so active.

As the inflammation progresses there appears a papule varying in size from a pinhead to a bean, generally yellow or yellowish gray in color. These papules break down and spread through the loose cellular tissue and thus extend. As they break down they present an area resembling a tubercular abscess.

Many of these facts can be illustrated in the report of a case. On Nov. 24th, 1914, Mrs H., age 22 years, residing on a lease in the Osage country, came to consult me, having been referred by her physician. She reported that about 500 head of cattle grazed about the house during the summer. In August a small pimple, the size of a pinhead, was noticed on the right side of the tongue near the anterior end. She opened same, but it did not heal. A few days later another spot appeared and was opened with the same result. These spots became sore and began to spread. Pimples continued to appear, break down and finally coalesced, forming a granular ulcer. She consulted her physician and was given K. I. and local treatment, with no improvement. My examination revealed a large granular mass the size of a quarter of a dollar, on the anterior right side of the tongue. The under surface

*Read in Section on Diseases of the Eye, Ear, Nose and Throat, Bartlesville, May, 1915.

of the tongue presented three yellow spots the size of pinheads. In the body of the ulcer could be felt three round nodules about the size of peas. The extent of the induration could be felt and was sharply defined. The surface of the ulcer was covered with a thin coating of pus. Upon wiping this away there was revealed a grayish surface studded with minute red tubercles. The edges of the ulcer were deep and clear cut. The lower teeth on the right side were in a deplorable condition. Suspecting a tubercular ulcer, I took scrapings and smears which were sent to the laboratory from which I obtained the following report: T. B., negative; Staphylococcus abundant; streptococcus and ray fungus predominating. The culture report also showed ray fungus predominating. Diagnosis was actinomycosis with recommendation for operation at once.

On December 4th I operated, removing one-third of the tongue, the right anterior portion, and thoroughly cauterized the entire surface of the incision. The case made an uneventful recovery. The soreness quickly disappeared and at the present time she is in good health and there is no evidence of a recurrence of the disease. She is able to talk more plainly than when the growth was present.

If the disease is diagnosed early and is present in organs and tissue accessible to the surgeon, prognosis is good. Complete removal of the growth will insure permanent cure, as metastasis is rare. When the disease is unrecognized and the organs are inoperable the patient usually dies in from two to three years. Potassium iodid is the drug which gives the most beneficial results and should be used in all cases.

Dr. Senn reports a case which was so extensive that it was impossible to operate. He gave the patient K. I. without apparent results. He decided to continue the remedy internally and also to use a 15 per cent. solution of K. I. with cataphoresis. A marked improvement resulted in less than two weeks. This treatment was continued for four months, when the patient left the hospital in perfect health. A report on the case four months later showed no recurrence of the disease. Copper sulphate has also been recommended.

SALVARSAN AND CEREBRO-SPINAL SYPHILIS*

Antonio D. Young, M. D., Oklahoma City, Okla.

Any remedial agent, to be effective in cerebro-spinal syphilis, must act before the death of the neurons. When a neuron is entirely degenerated it can no longer recover, but it may be temporarily damaged and still regain its integrity. Therefore, all that can be expected of salvarsanized serum in the class of diseases mentioned is to stop the toxic process and permit the damaged neurons to recover. Such symptoms as are produced by thoroughly degenerated neurons will remain.

Formerly general paresis and tabes were not considered to be active syphilitic diseases, but a post-syphilitic process—the wreck after the storm. However, since the discovery of the spirochete in the substance of the brain and cord of paretics and tabetics, these diseases are believed to be as truly syphilitic as a gumma or bone necrosis.

With this view it becomes necessary to explain why the usual anti-syphilitic remedies fail to exert a favorable influence. The theory is that some parts of the body are poor in vascular structures or are impervious to certain compounds and remedial substances introduced into the blood are so sparingly distributed in these localities as to be without therapeutic effect. The brain and cord are typical examples. This is the reason for giving anti-meningitis serum in the spinal canal.

Now, if Salvarsan, and by this I mean also Neosalvarsan, is highly destructive to the spirochete, why not inject a solution of this substance directly into the spinal

*Read in Section on General Medicine, Mental and Nervous Diseases, Bartlesville, May, 1915.

canal? This was tried and found to be a disastrous procedure, so some other method became necessary and Salvarsanized serum, of which I will speak later, was used. Dr. Hanson S. Ogilvie of New York has, however, developed the following technique for safely administering the Salvarsan directly into the spinal canal. (Journal, A. M. A., Nov. 28, 1914.):

"About 50 c. c. of blood are drawn into a centrifuge bottle by means of a MacRae vacuum needle. The bottle is immediately placed in a large centrifuge and the fibrin and cellular elements are thrown down. It requires a speed of about 3,000 revolutions for fifteen minutes to produce a perfectly clear serum. It is rarely necessary to centrifuge more than once if the blood is freshly drawn, but the process should be repeated if the serum is not absolutely free from cells and fibrin. To 15 c. c. of serum is then added the amount of Salvarsan to be given. This is done by mixing the Salvarsan as for an intravenous treatment, using freshly distilled and boiled water, and bringing the total quantity up so that each 40 c. c. of the solution will contain 1.0 dg. (0.1 gm.) of the drug. Each cubic centimeter of the solution will then contain 2.5 mg. of Salvarsan. With a 1 c. c. pipet, graduated into tenths, the desired amount can be readily measured from 0.25 mg. upwards. In adding the sodium hydroxid it is of the greatest importance to use only the exact amount required to very faintly alkalize the solution. When this has once been determined by testing with litmus paper, the sodium hydroxid should always be added quickly—not drop by drop. It is also very important that the temperature of the salvarsan and serum be the same when the two are mixed. The serum is then gently agitated to thoroughly mix the two and is placed in a thermostat at 37 c. for forty-five minutes. From this it is placed in a thermostat at 56 c. for thirty minutes. It is now ready to be given intraspinally and it should be used as soon as possible after preparation. Under no circumstances should a serum be used that is more than three hours old."

This method has the advantage of definite dosage but the patient is deprived of any anti-bodies that may be present in serum of a patient who has had an intravenous dose of salvarsan.

The original Swift-Ellis technique for the preparation and administration of Salvarsanized serum was as follows: (Wm. H. Hough, Journal, A. M. A., Jan. 17, 1914.)

"A dose (generally the maximum) of Salvarsan or Neosalvarsan is given intravenously in the usual manner. At the end of an hour 50 to 60 c. c. of patient's blood are drawn by means of venous puncture, clear serum is separated, diluted to 40 per cent., with normal salt solution, heated to 56 C. (132.8 F.) for half an hour, kept cool until the following day, then warmed to body temperature and injected into the subarachnoid space by means of lumbar puncture after the withdrawal of about 15 c. c. of spinal fluid."

At this time some observers withdraw the patient's blood twenty minutes after the injection of the Salvarsan on the theory that the Salvarsan content is much greater at that time than at the expiration of an hour.

In the earlier trials the blood was allowed to stand over night in a refrigerator to permit the separation of the serum. This delay has been found to increase the toxicity of the dose, so now the blood is centrifuged, the serum thus separated, and the dose is given at the same sitting at which the blood is withdrawn.

Improvement in syphilis of the central nervous system is manifested in two ways; first, by amelioration of clinical symptoms; second, by disappearance or diminution of pathological findings in the cerebro-spinal fluid. These findings when positive are the Wassermann reaction, increased cell count and increased protein content.

In estimating the value of any treatment in paresis and tabes, one must not forget the the natural tendency of the disease to periods of remission and even of apparent recovery. There have been reported several hundred cases treated by Salvarsanized serum and the results are given in such terms as "mentality improved," "Wassermann negative," "cell count normal," "clinically much better," and so forth. In no case, so far as I have been able to ascertain, has any competent investigator reported a cure. I, in common with every other observer, have seen cases vastly improved with no treatment. Patients have left insane hospitals and resumed their occupations, but if the diagnosis was correct returned sooner or later. So the simple fact of clinical betterment is no evidence of the value of the treatment.

At first thought it would seem that disappearance of pathological findings is conclusive evidence of a cure; but it has been shown in recent investigations that clinical and cytological improvement go hand in hand. Thus it is reasonable to presume that in untreated cases showing marked clinical improvement a like pathological betterment was concomitant. Hence this cannot be relied upon as proof of a cure unless the fluid is negative over a long period of time.

Now what is the standing of this treatment today? Simply this, many patients have improved and none have been positively cured. Sufficient time has not elapsed to decide and the verdict must be that of the Scotchman—"not proved."

DISCUSSION

W. J. Wallace: We will have to combine our treatment. The Salvarsan treatment, I think, is one of the treatments absolutely sure, but in connection with that we would have to keep up the physical treatment at the same time. You want to bear in mind the iodides. I think it should also be combined with the Salvarsan and in that way we could get better results.

Dr. Fishmann: A young man forty years of age had this coming on from three to four years. We gave him the treatment and he recovered rapidly. He was able to go back to his work. One day I injected the serum and later was called to find the patient with a serious headache and pain in the spinal canal. Meningitis has no resistance. We can inject the fluid and know it will take care of itself. The cases are controlled by injecting the fluid. I think it is the only thing we know of that has a good clinical result.

Dr. J. W. Riley: I think this proposition of using Salvarsan is a very serious proposition. There are many cases scattered in this country and all other states in the Union in which this statement is true. Today our asylums in this country are showing a large increase in the cases of insanity, the result of syphilis.

Dr. Moorman: Recently, while in a Boston hospital, I had the privilege of seeing some of these cases treated by this medicine. While I was there Dr. Walker, who had charge of this work, made his report. He reported pronounced improvement in many cases where he injected this treatment. I saw improvement in some of them, but did not get to remain long enough to see much of it.

ARTERIOSCLEROSIS—EARLY RETINAL SYMPTOMS*

W. T. Salmon, M. D. Oklahoma City, Okla.

In looking over the history of cases in my record book, I noticed the death record of several patients who first came to me in the regular routine of examination for glasses. I had tabulated some of these cases as "Suspicious Arteriosclerosis" and had advised them to consult their family physicians. The subsequent reports evidenced that only a few had done so, others returning later with well developed retinal symptoms of arteriosclerosis. Most of them stated that at the time of the first examination, they were feeling so well they considered my advice as suggestions coming from an alarmist.

I am convinced that I was direct or at least timid in my advice to these patients and I am sure that many of you in the fear of being misunderstood may have been too modest to forcibly impress your patients with the consequences of suspected diseases. There seems to be an increasing mortality from cardiovascular and renal diseases and I think it safe to predict that as soon as the laity become familiar with the symptoms of arteriosclerosis it will become a popular disease and the physicians will be consulted about the symptoms that hitherto escaped notice or were discovered by accident.

*Read in Section on Diseases of the Eye, Ear, Nose and Throat, Bartlesville, May, 1915.

As the first symptom of arteriosclerosis and of many other grave diseases so often first seen in the eye, I shall further predict that there will soon be a time when the examination of applicants for life insurance will not be complete or accepted without a thorough ophthalmic report.

"Of all organs the eye is best adapted to the study of pathological conditions that attend this disease. Though the ophthalmoscope may be observed the secret processes of disease and repair; currents of living blood may be seen circulating within the vessels; hemorrhages and exudates may be seen to come and go, and blood vessels may be seen to pass through varied stages of degeneration."

Arteriosclerosis is defined by Osler as: "A condition of thickening, diffused or circumscribed, beginning in the intima, consequent upon the primary changes in the media and adventitia, but later involving the latter two coats of the arteries. The process leads in the large arteries to what is known as arteritis obliterans and atheroma, and seriously interferes with the normal functions of the several organs."

Elsworth Smith (*Annals of Ophthal.*, Jan., 1914) has fittingly said, "Though arteriosclerosis is a general disease, the arterial circuit is not always uniformly involved. In some cases the brunt of the disease is spent on the heart; in others the kidneys, the brain, the digestive tract, etc., and thus according to the distribution of its ravages arise the various symptoms making up the complex picture of the disease."

Frequently the discovery of the disease is purely accidental, as its development is insidious and devoid of symptoms that would attract the patient and lead them to consult a physician. A disturbance of vision is one of the early symptoms for which the oculist is usually consulted. The size and location of the lesion have much to do with the extent of the visual disturbance. When there are rose-colored or yellowish red spots in the region of the macula there is usually some failure of vision; when the lesion is small and situated away from the macula the perimeter will disclose scotomata.

The most characteristic symptom that may arouse suspicion is the complaint that the middle letter of a word is blurred, irregular or sometimes momentarily absent. Such statement should suggest a possible central scotoma and lead to the testing of the field of vision. Other symptoms that the patient may tell you of is tinnitus aurium, dizziness, loss of hearing, insomnia, and uneasy gnawing at the stomach, and bleeding at the nose. The presence of subconjunctival hemorrhage, without apparent cause, should direct attention to conditions apt to increase blood pressure; especially should intraocular hemorrhage after cataract extraction lead to testing the blood pressure.

So little is known of the source of arteriosclerosis that no one has spoken with authority of the etiologic factors which induce the structural changes. Different toxins coursing through the blood stream is considered the prime cause. The hereditary predisposition to vascular degeneration often manifested by premature senility is an important factor in the history of many cases of arteriosclerosis. Such cases have scarcity of hair and imperfect development of reproductive organs, and may pass unscathed through childhood but later develop cardiac hypertrophy, nephritis, etc. No age seems to be exempt. In infancy it is rare but the reverse is true in senility. It is estimated that over 50 per cent. of people examined after the forty-fifth year have some form of arteriosclerosis. Arterial degeneration is found more frequently in overtrained athletes and hard-working people than in the physically weak.

The toxins from typhus, typhoid, erysipelas, scarlatina, diphtheria, measles, syphilis, articular rheumatism, gout, etc., that directly raise the blood pressure and at the same time have an injurious effect on the arterial wall, are some of the many factors that contribute to arterial degeneration. Intestinal auto infection and intoxication is regarded as a very common cause, as in lead, phosphorous, tobacco and alcoholic poisoning exogenous causes. The waste and nervous strain in the excited pursuits of fame and fortune, coupled with overindulgence in eating, predispose a man of forty to have arteries of sixty years.

There has been much controversy over the relation of nephritis and arteriosclerosis. It has been strongly presented by many authorities that nephritis caused arteriosclerosis and controverted by authority equally convincing maintaining that the reverse was true. The most rational conclusion to be deduced from the many theories presents the idea that the two conditions are induced by the toxins carried to the kidneys through the blood stream. From our present understanding of the two conditions it is reasonable to conclude that in the treatment of nephritis due consideration should be given to the cause and morbid anatomy of arteriosclerosis.

One of the most pronounced ocular symptoms of arteriosclerosis is degenerative retinitis, presenting through the ophthalmic picture various pathological processes of the vessels. The first visible change is dilatation of the arteries which become broader and tortuous. Thoma attaches much importance to a locomotion pulse which is most marked at the bends and curves of the vessels. It is characterized by a lateral displacement of the whole vessel. Locomotion pulse occurs in all cases of incipient arteriosclerosis in which the arteries are primarily affected, but as it causes no disturbance of vision it is seldom seen by ophthalmologists. As vascular degeneration progresses the arteries become rigid and arterial pulsation disappears. Locomotion pulse must be distinguished from the pressure pulse seen in glaucoma and whenever the general blood pressure sinks below intra-ocular pressure.

In the normal condition the arteries are translucent. It is the column of blood within the vessels and not the vessels that are seen. The vessels can hardly be distinguished from the surrounding retina and the veins that underlie an artery may be outlined. But in arteriosclerosis the underlying vein is obscure and there is an impeded circulation and sometimes an ampuliform dilatation. The thinning and the dilatation are soon followed by proliferation and thickening extending into the lumen of the vessels, resulting in endarteritis obliterans, with constant disturbance of nutrition in the area supplied by the vessels. The vessels will assume a color form, the central light streak becomes brighter and broader to the periphery and often has a frosted fringe projecting from their borders. The vessels appear broken where they cross and an underlying vein may be hidden by the artery or the underlying artery may show through the vein. The early relaxation of the arterial walls is manifest in the terminal branches, and small branches which formerly were invisible may come into view. The capillaries also are distended, leading to a uniform redness of the optic disc.

Other early signs of vessel disease in the fundus is the presence of rose-colored or yellowish-red spots of the choreoretinal disturbance; in other cases white patches may be seen. There may be edema of the retina manifested in grayish opacities, or they may spread out into a fine gray haze. There may be hemorrhagical line extravasation along the course of the vessels or may be scattered like little islands throughout the retinal surface. The less pronounced symptoms should be sought through a dilated pupil by a painstaking ophthalmoscopic examination.

A correct interpretation of the blood pressure may furnish important diagnostic information, but as is usually interpreted may be misleading. It is not unusual to find a healthy person with a high systolic pressure, and we may find pressure normal or subnormal in patients with greatly thickened or even calcareous arteries. The blood pressure falls from any cause that weakens the heart and vasoconstrictor centers.

In parenchymatous nephritis the pressure may be low until the large white kidney gives place to the secondary contracted kidney. Mental and physical overwork may cause arteriosclerosis, yet in the depressed nervous condition due to exhaustion of the nerve centers we may find hypertension, as is true in arteriosclerosis from the toxin of tobacco poisoning.

It is impossible to restore the organic changes that are the result of the ravages of this disease, and if anything is to be accomplished in retarding the progress of such pathological destruction the early symptoms must be detected before there

are marked pathological changes in the kidneys, cerebrum and vascular system. The most that can be done, in a majority of cases, is to arrest the progress, lower the blood pressure and regulate the body metabolism. The lack of a thorough understanding of these cases and the unfavorable reports obtained have been so universally discouraging that many physicians have failed to be thoroughly enterprising in seeking the best remedies and in reporting their cases. The recent report of physicians who have been most zealous in their efforts should encourage us to diagnose these cases as soon as possible and to impress them with the gravity of the disease and to encourage them in the use of the remedies that afford comfort and longevity. The reduction of the blood pressure in those cases where it is safe to do so is important, as it shows the effect of the treatment and renders the prognosis much better. Among the drugs used for lowering the blood pressure, amyl nitrite by inhalation is used as much for diagnostic purposes as for therapeutical effect. Its action is manifest within fifteen seconds and the blood pressure may be materially decreased within three minutes.

Nitroglycerine and sodium nitrite are extensively used but erythrol tetranide, while slower in action, is much more lasting. The prolonged use of potassium iodid, probably in consequence of its vasodilator action, is a very effective remedy in many cases. In all cases where it may be safely used auto condensation is the best method of reducing hypertension. While my experience is limited with this last remedy, there is much evidence by good authorities on electro-therapeutics proving that hypertension may be reduced and sustained at almost normal condition by the judicious use of the d'Arsonval method. This method is indicated in all cases in which hypertension is not compensatory and consist in the employment of 400 or 500 milliamperes from ten to fifteen minutes every day, to be changed to every other day as improvements suggest.

I desire to call to your attention that the reduction of hypertension is not indicated in every case, but is contra-indicated in all compensatory cases. While these remedies should be tried in selected cases, I am convinced that they are too much depended upon. The hypertension is only a symptom and the use of these remedies do not effect the prime cause of the disease. More stress should be laid upon elimination, rest in bed, self denial in careful diet, and complete reconstruction in the mode of living, with abstinence of tobacco, alcohol and the removal from the effect of all external poisons that effect the general system.

FEDERAL ANTI-NARCOTIC LAW—SUBSTITUTE FOR OPIUM

J. Culbertson, M. D., Maud, Oklahoma.

The Federal Anti-Narcotic Law and a substitute for the opiates seem to run rife in the medical literature just at this time. While neither subject excite or interests me to the boiling point, I am sometimes amused at the discussions. As to the Federal Anti-Narcotic Law, I see nothing that it has done in the way of curtailing the consumption of the dope except by way of the restraint it has placed upon the druggists of this country. It places said druggists under the direct supervision of the physieism so far as the administration of the stuff is concerned, though it places no restrictions as to how much the physician may prescribe, or how many prescriptions the druggist may fill, or how much the consumer may use. It places some trouble upon the shoulders of the busy physician, though he should console himself with the fact that he has become accustomed to trouble which seems to be in line with his profession, and the outcome of it is that it has placed a little bit of restraint upon the use of the opiates so far as it has increased the inconvenience of obtaining it, and no farther.

I have never used the opiates to excess in my practice—that is, any farther than to cover all indications which came to my notice. As for that matter, I do not expect the Anti-Narcotic Law to come between me and such indications as I may encounter in my daily practice. Therefore, the trouble of its dispensation and the annual dollar is all that is tantalizing my narcotic happiness just at present.

In defense of the opiates; I wish to say a few words which will rather outline my sentiments on the dope question. The discovery of opium and its derivatives was one of the greatest blessings that was ever bestowed upon suffering humanity. Chloroform was another of the great blessings. Either of them in their indicated field of action has never been equaled by any discovery of the human age.

Do you believe there was ever a life saved by the use of any of the opiates? I am sure that they have saved more lives than any other group of medicines in existence, and I feel sure that you believe on the same lines. Then, why blame the remedy for an offense which was committed by a human being? It has frequently been said that "It takes all kinds of people to make a world," in which I am a firm believer. Why is it that we are not all dope fiends? I have suffered pains of all descriptions, both imaginary and real, at all hours of the night as well as day, and on nearly every spot of ground in my territory, with dope in my pockets, then why am I not a dope fiend? Why are there thousands who are not dope fiends? Because the dope fiend is an "Opsonins Inferioraris" so far as self denial and resolution is concerned.

What will we expect of a satisfactory substitute for opium? If it has all the good qualities of the opiates, how long will it be until it will be dope, too? There will never be anything discovered to so completely alleviate human suffering temporarily, and to push up on the part of the patient that incentive to peer into the bright side of his trouble just at a moment when such incentive is necessary to life, that will not be contorted into a harmful armamentum by those neurotics who are smited with an insufficiency of resolution and self denial, and who are contaminated with this morbid desire to blunt the reasoning and stimulate the imaginary powers of the mind. Any remedy that may be discovered which has this desired action, and such large field of this action, will be a dope for those who are so constructed nervously, and it will continue to be a natural impossibility to restrain such excessive indulgence except to place the administration entirely in the hands of the physician, with a penalty for the excessive administration to the dope fiends by a better Federal Anti-Narcotic Law than we now have.

What is it in God's given blessings and what is it in the devil's given temptations which has a soothing effect upon the profound or veiled neurotic, that will not be excessively indulged in? This morbid indulgence is practiced by tobacco users, by religious fanatics and "holy rollers," as well as by the fiend. I have known of a few cases where religious fanaticism preyed upon the minds of those properly constructed neurotics until it produced a profound insanity, and in one case it was the indirect cause of death. Was this in the fault of the religion or was it in the fault of the human being? Was it in the fault of the paranoic construction of the nervous system of the individual, just the same as the melancholic condition of the dope fiend?

So let us not condemn the great blessings which God has placed in our hands with which to combat the sufferings which the devil (?) has inflicted upon mankind, and at the same time exonerate the violators of reason and moderation. If condemnation is our aim, let us condemn the guilty parties who ignore the laws of moderation in the abuse of the blessings which has been placed before them for their relief in time of actual need. And while there is no knowledge lost in research work, I suppose it will be well for us to continue the search for a substitute for opium. If there be nothing better discovered, there would probably be a short recess, while the fiends were moulding the new product to the demand of their appetites, at least.

Let us not yet condemn the new Federal Anti-Narcotic Law for the reason of its good intentions. It is said that a person, or a profession who, or which, is contented with its present holdings, will soon be on the retrograde. That is, "If we stop, we stick," but if we "keep grinding we will keep sleek," so we are to suppose that we are on the right track after all.

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Failure to receive the Journal should call for immediate notification of the editor, 507 Barnes Building, Muskogee, Okla.

Local news of possible interest to the medical profession, notes on removals, changes in address, deaths and weddings will be gratefully received.

Advertising of articles, drugs or compounds not approved by the Council on Pharmacy of the A. M. A. will not be accepted.

Advertising rates will be supplied on application. It is suggested that wherever possible members of the State Association should patronize our advertisers in preference to others as a matter of fair reciprocity.

EDITORIAL

THE BEGINNING OF THE NEW YEAR

Our readers will note that with this issue we have begun the year 1916 as Volume Nine, Number One. In the beginning of our journalistic existence the first issue of the *Journal* was entered in June, and since that time each June issue has been issue number one of the current year. There would be no particular reason for changing the order except for the fact that many advertisers are billed at the end of the year only; new ones often start at that time and there is a general tendency grown of habit to close matters with the end of each year and embark on new enterprises at that time, so to accommodate those fixed tendencies and to conform to the plans of most other publications we make our's start anew with January, 1916.

Considering the general handicaps to which American Business has been subject, there can be no reasonable complaint as to the condition of affairs of the Oklahoma State Medical Association and its *Journal* during 1915, the most momentous year in the history of the world. Advertising has been increased markedly. We here call attention of our readers again to the high class of our supporters from the advertising standpoint. No journal has better, and we stand ready to make good this assertion on any and all scores, and, if through oversight, anything unworthy creeps in, it is generally understood that we will at once sweep it out. It may be of interest here to note that the motto of our solicitation to advertisers is "Ethical advertising only accepted. If your product is not in that class, we do not want your patronage." To this rule we adhere. It may be of even more interest to some of our readers to know that the *Journal* has long ago refused to accept advertising of compounds made the subject of laudatory comment by some of our members; that the refusal is based on the fact that the compound is unscientific and has not been able to stand the acid test of scientific investigation. We take occasion again to ask our readers, if they have money to spend with anyone for supplies, to patronize those who support our *Journal* with their advertising appropriations.

OUR INCREASED MEMBERSHIP

It was reasonably to be expected that the past year would show a decrease in our membership, at least not a substantial increase. However, despite unfavorable conditions, the membership lists have gone higher than ever before in the history of the Association. More than 1450 men were placed in good standing during the year. It is to be hoped that the attractiveness of the proposition of medical defense will further increase our numbers during 1916. Much will depend on the efforts of county secretaries to promptly collect 1916 dues. There is a greatly added responsibility not heretofore existing, due to the establishment of medical defense, which must be operated on business rather than sentimental grounds, and our success in this respect will largely depend on co-operation between the individual member and the secretaries. Members should not impose on their secretaries to the extent of having the secretary hunt them up and collect dues. It is to the possible vital interest of the member to attend to his own business in this respect by promptly paying his dues. A lapse of a few days in this particular may preclude the assistance advanced by the defense feature should trouble overtake the member. We urge on every individual that he use ordinary business promptness in these matters, that he pay the same attention to his professional reputation that he does when he looks after his fire insurance policy before its expiration by promptly paying his dues. Above all do not impose on the county secretary to the extent of having him look you up and attend to your business for you.

IF YOU ARE SUED

Do not make the statement that you are defended by the State Association. Simply make as few statements about the case as possible, remembering that only in court will statements count for anything and that attorneys do not care much who defends you, so long as they can make a case in court to tear down your reputation and mulct you for whatever they can. Perhaps the best statement to make, if you feel like making any, is that you performed your services properly, that if there is a bad result as alleged, it is not due to fault or negligence on your part. Stop there and make notes on every phase of the case you recall, not forgetting that what may seem trivial to you or simple enough for anyone to know may be of vital interest to your proper defense, when your attorney knows it. We should make it a point to gain every bit of information possible on the case. Wherever practicable, a signed statement of prospective witnesses is better. If this is taken when the issues are fresh in the mind of all concerned they are not so likely to be forgotten months later when they are needed and must be positively made in court.

PERSONAL AND GENERAL NEWS

Dr. T. T. Matlock has moved from Greenfield to Carmen.

Dr. Houston B. Fite, Tahlequah, has moved to Muskogee.

Dr. L. A. Newton, of Guthrie, has moved to Oklahoma City.

Dr. R. E. Bartlett, Carmen, has moved to Gray Hawk, Ky.

Dr. Geo W. Tilly, located for many years at Pryor, has moved to Dewar.

Dr. and Mrs. R. A. Workman, Woodward, have returned from California.

Dr. Brown W. Randel, Muskogee, is doing post-graduate work in the East.

Dr. W. R. Butler, Maud, was painfully injured when thrown from a buggy recently.

Dr. H. M. Stricklen, Tonkawa, is doing post-graduate work in the New York Polyclinic.

The Weeks Review (Apache) has announced that hereafter it will not accept patent medicine advertisements.

Dr. Walter Penquite, Chickasha is reported as seriously ill with influenza.

Dr. E. A. Cavett, Kiel, sustained a fracture of his collar bone recently when his machine skidded and turned over.

Dr. Fred H. Clark, El Reno, announces the opening of a hospital where he is prepared to care for any cases referred to him.

Dr. P. H. McGinnis, Tulsa, was recently robbed while passing out of a theatre in that city. The thief got away with \$60.00.

Dr. R. L. Mitchell, Vinita, recently received a fracture of the left leg when his horse became frightened, turning over the buggy.

Dr. W. W. Walton, Coweta, recently suffered a severe injury when his machine turned over. He had several fractured ribs and sustained many painful bruises.

The **Rock Island Railway Surgeons Association** met in Oklahoma City December 1st. It is reported that more than two hundred physicians attended the meeting.

Dr. LeRoy Long, Oklahoma City, has been selected to represent the State Medical Association at the Conference on Medical Education, Public Health and Legislation, meeting in Chicago, Feb. 7.

Dr. L. W. Cotton, Enid, had a narrow escape from death recently when his car was struck by a Santa Fe freight train. His car was badly damaged, but fortunately the doctor escaped with only minor injuries.

J. R. Ramsey, City Attorney of Tulsa, has presented an ordinance to the Commissioners making the possession of morphine, cocaine and any other drugs, the sale of which is regulated by federal law, severely punishable.

TULSA HOSPITAL, it is announced, has changed hands by the election of a board of directors composed of John O. Mitchell, D. F. Connally, L. L. Hutchison and W. H. Mainwaring. Dr. H. H. Smith, owner of the majority stock, will conduct the institution.

Tulsa papers announce the organization of the Oklahoma Hospital Association, with Dr. Fred S. Clinton, Miss H. C. C. Zeigler and H. J. Brickner as trustees. The dimensions of the building will be 41x131. It will be four stories high, of steel, concrete and brick construction and will cost about \$75,000.00.

Dr. A. Sophian, formerly of Kansas City and New York and most favorably remembered for his control of the Dallas, Texas, epidemic of meningitis in January-February, 1913, has undertaken to establish a research laboratory in connection with St. Anthony's Hospital, Oklahoma City. It is said that \$10,000.00 will be spent on the laboratory and approximately \$150,000.00 will be expended in general improvements of St. Anthony's.

COUNTY SOCIETIES.

Pittsburg County Society elected officers for 1915 on December 8th, as follows: President, J. E. Davis, McAlester; vice-president, J. O. Grubbs, McAlester; secretary, Jas. C. Johnston, McAlester; censors, W. C. Graves, L. S. Willour, McAlester; delegates, L. C. Kuyrkendall, Ed. D. James, Haileyville; alternates, Jas. C. Johnston, T. T. Norris, Crowder.

Choctaw County Society elected: President, R. J. Schull; vice-president, C. H. Swearingen, secretary-treasurer, E. R. Askew; delegate, W. N. Johns; alternate, H. H. White, all of Hugo, censors, W. D. Moore, Sawyer, C. H. Swearingen, E. R. Askew, Hugo.

Greer County Society elected 1916 officers as follows: President G. Fowler Border; vice-president, E. M. Poor; secretary treasurer, Thos. J. Horsley, Mangum; delegate, G. W. Wiley, Granite; alternate, R. L. Holt, Mangum; censor, H. W. Finley.

Dr. J. M. Cooper, secretary of Central District Society, announces the next meeting at Enid, January 11, 1916. Clinics are invited for the occasion.

Woodward County Society elected officers December 7th. Dr. L. J. Moorman, Oklahoma City, read a paper on "Tuberculosis." The officers are: President, H. E. Stecher, Supply; secretary-treasurer, G. A. Westfall, Supply.

Garfield County Society met December 3rd in Enid. Clinical work was the feature of the occasion. Dr. P. A. Smythe, recently returned from Red Cross service in Europe, read a paper on the work done in the field with special reference to the handling of wounds of war. Election not reported.

McIntosh County Society met December 13th in Eufaula. Program: Paper, D. E. Little; "The Business Side," a general discussion. Election of officers not reported.

Craig County Society met in Vinita December 7th. Program: "Tuberculosis." R. L. Mitchell, on treatment; W. M. Jackson, on the surgical treatment, Louis Babgy, on prevention. Officers for 1916 are: President, A. W. Herron; vice-president, F. L. Hughson; secretary-treasurer, W. R. Marks, all of Vinita.

Tillman County Society met in Frederick, December 7th, electing: President, T. F. Spurgeon; Frederick; vice-president, O. G. Bacon, Davidson; secretary-treasurer, L. A. Mitchell, Frederick; delegate, W. A. Fuqua, Hollister; censor, A. B. Fair, Frederick.

Marshall County Society met December 7th, with the following program: "Phylaccogens," T. A. Blalock; "Acute Bronchitis," G. H. Fink; "Treatment of Acute Lobar Pneumonia," J. L. Holland, Madill; "Diagnosis and Treatment of Bronchial Pneumonia," M. D. Belt, Woodville; "Influenza," E. F. Lewis, Kingston. Election not reported.

Muskogee County Society met December 13th, electing officers as follows: President A. W. Harris; vice-president, A. N. Earnest; secretary-treasurer, J. G. Noble; censor, J. J. Dial.

The Tulsa Academy of Medicine was organized October 28th, with the following officers: President, W. Forrest Dutton; vice-president, R. S. Wagner; secretary-treasurer, Paul N. Atkins, all of Tulsa.

Pottawatomie County Society met in Shawnee December 11th. A feature of the occasion was that the program was a joint matter between the legal and medical professions of the county. Following is the program: "The Expert Witness," Judge Roscoe C. Arrington; "Wounds in their Medico-Legal Relations," Dr. J. H. Scott; "Some Suggestions in Medical Jurisprudence," Judge W. M. Engart; "Gun-shot Wounds and their Missiles," Dr. F. L. Carson.

Banquet, Toast Master, Judge L. G. Pitman; "The Medical Association," Dr. W. C. Bradford, President; "The Bar Association," Judge Chas. E. Wells, President; "The Hospital," Hon. F. P. Stearns, Mayor; "The Legal and Medical Professions," Judge P. O. Cassidy; "The Professional Card," Otis B. Weaver; "Seeing Things," Dr. H. H. Wilson; "The State," Judge J. H. Miley; "The Estate," Dr. J. E. Hughes; "Some Funny Stories," Judge Park Wyatt and Dr. E. E. Rice; "My Appendix and Appurtenances There unto Belonging," Judge I. C. Saunders; "Is Politics a Game?" Dr. G. S. Baxter and Judge J. D. Lydick; "A New Operation for Lawyers," Dr. J. A. Walker; "My Doctor and I," Judge J. H. Wahl; "The Record," Judge Wm. Beatty; "Current Events (Twenty Years Hence)," Dr. J. M. Byrum; "Some Clean Stories," Dr. R. M. Anderson; "Valedictorian," Judge W. L. Chapman.

Woods County met December 15th in Alva, electing: President, S. H. Welsh, Dacoma; vice-president, G. G. Gordon, Wynoka; secretary-treasurer, O. R. Greeg, Alva; censors, G. N. Bilby, Elizabeth Grantham, C. T. White, Alva; delegate, E. P. Clapper, Wynoka.

Washington County Society, met December 14th, electing: President, H. Clarence Weber; vice-president, L. D. Hudson; treasurer, A. North; secretary, J. G. Smith, Bartlesville.

Comanche County Society elected the following officers: President Dr. H. A. Angus; vice president, J. C. Johnston; secretary-treasurer, G. Pinnell; censor, Dr. W. B. Mead.

Pontotoc County Society elected L. M. Overton, Fitzhugh, president; Fred Harrison, Stonewall, vice-president; J. L. Jeffress, Roff, secretary; J. M. Vaden, Ada, C. L. Orr, Roff, and S. P. Ross, Ada, board of censors; W. D. Faust, delegate.

Blaine County Society met December 16th and elected the following officers: H. W. Doly, president, Homestead; J. A. Norris, secretary, Okene; J. S. Barnett, Hitchcock, delegate.

Beckham County has for its 1916 officers: V. C. Tisdal, president; C. N. Windle, vice-president; J. E. Yarbrough, secretary-treasurer, Elk City; J. D. Warford, Erick; H. K. Speed, Sayre, delegates.

Kay County elected officers December 16th: President, E. J. Orvis, Blackwell; vice-president, H. H. Bishop, Tonkawa; secretary, A. S. Risser, Blackwell; censor, Owen Northrup, Brannan; delegate, A. S. Risser.

Kiowa County elected: President, J. A. Muller, Snyder; vice-president, J. R. Dale; secretary-treasurer, A. L. Wagoner, Hobart; censors, H. C. Lloyd, Hobart, T. A. Boyd, Gotebo.

Grady County elected: President, A. B. Leeds; vice-presidents, Wm. R. Barry, Bradley, and U. C. Boon, Chickasha; secretary-treasurer, Martha Bledsoe, Chickasha. Dr. and Mrs. Thraikill entertained the society with a seven-course banquet at their home at which "shop" was strictly taboo.

PROCEEDINGS OF THE CLINICAL SOCIETY OF ST. ANTHONY HOSPITAL— NOVEMBER MEETING

"RESIDUAL" SPINA BIFIDA.

By Horace Reed, M. D.

Mrs. J., age 30, entered hospital on account of chronic cystitis and complete loss of power in sphincter and detensor urinae muscles.

Family history negative. Patient states that other than the present trouble she has always been healthy. On direct questioning she admits that she was troubled with the bed wetting habit until she was quite advanced in years of childhood, and that there never was a time since she corrected the habit but what she had to void at least four times nightly. This condition she considered normal for herself.

Three years ago painful and increased frequency of urination came on. This frequency, one year later, had drifted into that of a continuous flow of bloody, purulent urine from the bladder, and this state of affairs persisted up to the present.

There have been three pregnancies—two easy, normal labors and one miscarriage (induced) without lacerations or other complications. Children are ten and one and a half years of age, respectively. Miscarriage four years ago.

Physical examination: The patient is well nourished and muscular. No abnormal findings of note except as follows: The labiae and integument of the thighs, where there is contact in the immediate locality of the vulva, is excoriated and soiled by the escaping urine. The perineum shows no scars or signs of lacerations. The levators ani are poorly developed but are intact. Uterus in normal position, adnexa is normal.

The accessory muscles of the pelvic floor (Glutei) are unusually well developed and this makes the perineum appear to be situated higher than the normal.

Examination of spine reveals a very decided bony defect in the development of the arches of the sacrum. This defect extends up to about the third segment and consists in the absence of the arch on one side and a corresponding overdevelopment of segments on the opposite side. Only slight dimpling of the overlying integument is noted.

This patient presents two distinct clinical entities. The first is the congenital weakness, presumably because of inadequate development of certain structures in the genito-perineal region. The second is chronic cystitis. I limit my discussion to a consideration of the cause underlying the former condition.

In nomenclature I wish to term this cause as "Residual" Spina Bifida. I base this diagnosis upon certain incontrovertible facts.

Fact 1: *Embryological*: The coalescence of the arches which forms on either side of the neural canal, begins at two points and proceeds in two directions, namely, forward and backward. The two meet in the region of the occiput. The points where this coalescence becomes complete in point of time are (a) anterior, (b) middle and (c) posterior. In early fetal life the spinal cord extends to the lower end of sacrum. Gradual retraction takes place until eventually the cord proper reaches only to the second lumbar vertebra, and the dura to about the level of the second sacral segment.

Fact 2: *Pathological*: Failure of the normal canal to close properly (spina bifida, meningocele, etc.), is found at the points where the final process of coalescence of the arches takes place; therefore in the region of the glabella (rarely), occipital (rather frequently) and lumbo-sacral region (most commonly).

Fact 3: *Anatomical*: Neurologically considered the genito-perineal region is the most distal part of the body. Therefore any lesion of cord, it matters not how high or low such lesion is situated, must interfere with the proper innervation if the terminal structures as well as with that of the structures which are supplied by the intervening segment.

Fact 4: *Clinical* Spina Bifida and Spina Bifida Occulta are not found below the terminus of the dural pouch, therefore not below the second sacral segment. The reason, therefore, is that the nervous tissues necessary for the maintenance of such lesions have disappeared (columns and membranes), leaving in their stead, if no lesion ever existed, the terminal nerves of the cord, or if such lesion did exist, the scar or development of defect as a remnant.

In all cases of spina bifida or spina bifida occulta attended by clinical evidence of faulty innervation, there is a disturbance of the development of the structure in the pelvic floor and adjacent parts (prolapse of uterus from lack of muscular support, enuresis, incontinence of feces, etc.).

Accepting fact No. 1, we would expect in the light of fact No. 2 to frequently find in the lower sacral region, or considering fact No. 4, the evidence of such a lesion having existed. That such is the case has been abundantly substantiated in my experience. There are scars and pits in the integument of the mid-line and bony defects which are rather commonly found below the point where it is possible for a true spina bifida to persist in the fully developed being. In patients with disturbances such as this patient has experienced, in the absence of all other probable causes, I have so far invariably found the evidence of the trouble to have been such as I have here tried to describe and of the correctness of my conclusions as to this as a causative factor I can scarcely see any reason for a doubt.

Residual spina bifida represents a true spina bifida which existed before retraction of the cord and membranes and is found only at some point below the second sacral segment. The amount of disturbance incident to the lesion will depend upon the height of the upper limit of the lesion and the amount of the nervous tissue which was previously involved.

SURGICAL AND THERAPEUTIC NOTES AND SUGGESTIONS

EDITED BY DR. L. S. WILLOUR, McALESTER.

Gastric lavage following abdominal operations often prevents incipient peritonitis from progressing by inhibiting peristalsis.

Large enemata, except by the drop method, should never be given in the presence of peritonitis.

The careful excision of a small piece of malignant tumor with a sharp scalpel need not as a rule tend to disseminate the disease; however, incision through the unbroken skin is seldom admissible, as the skin is the chief protection against infection.

In preparing patients for operation who have been suffering from malignant or other destructive processes, it is important to prepare for the neutralization of the acid by-products by giving food, water, glucose and sodium bicarbonate. This to be continued after operation and during convalescence. Acidosis is a most important factor in the destruction of these patients.

The early diagnosis of the cause of abnormal uterine bleeding, either menstrual or inter-menstrual, is most important. Always make an examination, both manual and through a speculum, and with a good light.

1602A—THE NEW EHRlich PREPARATION—SALVARSANNATRIUM.

Professor Wechselmann publishes the interesting news that in the new arsenical product, salvarsannatrium, the profession has at its command an anti-syphilitic agent in which are united the claimed superiority of the old salvarsan and the simplicity of preparation and ease of administration of neosalvarsan. Many have claimed that whilst neosalvarsan was easily given—a ten c.cm. syringe being all that was needed—yet injection for injection it did not equal the old salvarsan in power, serologically at least, and, also that it was more dangerous. Those who have use both and are not biased in opinion as to their respective merits, will not readily submit to the second proposition, for undoubtedly the concentrated solutions of neosalvarsan do not occasion as much distress as the more dilute solutions of old salvarsan.

But be this as it may, we shall welcome salvarsannatrium provided that it really combines the advantages of its two predecessors. And that it does we have not only Wechselmann's word but also that of Dreyfus at Frankfurt, the home town of the distinguished originator of salvarsan.

Wechselmann writes in the *Muenchener medizinische Wochenschrift* for February 9, 1915, that he has now employed salvarsannatrium more than 12,000 times. Prof. Ehrlich gave two products to Wechselmann to try out, but as their effects were identical and the one required the addition of hyalidit, it was determined to market the second, which was named salvarsannatrium and given the laboratory designation of No. 1206A.

The arsenic content of the new salvarsan preparation is about 20 per cent., and therefore the dosage corresponds to that of neosalvarsan.

Wechselmann writes that salvarsannatrium in doses of 0.3–0.45 gm. is harmless. As a rule, the reaction is barely noticeable, or in florid syphilis the temperature may go up a trifle. As an indication of its safety and freedom from any cumulative as well as anaphylactic effect, Wechselmann remarks that he has given as many as 40 to 50 doses (0.45); and as often as 2 and 3 times a week. He recommends a dilution of 0.1:10 in a 0.4 per cent. salt solution, remarking that a higher concentration occasionally has been followed by vomiting and other manifestations of reaction.

It is to be hoped that this latest of the salvarsan agents in the hands of the average clinician throughout the world, will fulfill the claims made in its behalf by those who stand sponsor for it, for, according to these claims it seems the ideal means of treating syphilis.—*The Urologic and Cutaneous Review*.

CORRESPONDENCE AND MISCELLANEOUS

FROM THE OKLAHOMA STATE BOARD OF HEALTH, GUTHRIE, OKLAHOMA.
DR. JOHN W. DUKE, COMMISSIONER.

The influenza bacillus is working overtime in Oklahoma, and by spring perhaps a third of the population will have been in bed with influenza. Many an able-bodied man arises in the morning with vim enough to split rails, but by evening is out of the running. He has high fever, and pains enough in his head, bones and muscles to upset a neighborhood. He shivers with chilly sensations. The influenza bacillus has grabbed him. Beware of the influenza patient. He will sneeze and sneeze until the entire household becomes infected. All sputum and nasal discharges should be deposited on gauze or a handkerchief and burned. It often happens that the sufferer recovers in two or three days. Again, the prostration may be so great as to require weeks for recovery. Condition of health at the time of attack is often a measure of the period of convalescence. It is always best to call a competent physician, as the after results of a severe attack of influenza are grave. The patient should be put to bed and kept there. Avoid giving cold baths. However mild the case at its beginning, there is always danger of relapse, with serious complications. Pneumonia, heart failure and meningitis are close friends of the influenza bacillus. One possible result is chronic influenza, known as bronchiectasis, developing into a chronic cough, worse in winter, and attended by purulent sputum. The symptoms are sometimes mistaken for tuberculosis. In influenza the patient should be fed according to his digestive capacity, and given plenty of water to dilute the toxins that have invaded his system. Above all, obey the physician. It will prove a saving in time, health and money.

VACCINATION PREVENTS SMALLPOX

Until the time of Jenner, smallpox was one of the commonest and deadliest diseases. Vaccination, however, produces immunity to smallpox, when properly performed is practically free from danger. With improved technique, danger from syphilis has been done away with. Immunity by vaccination is not lasting, and the latter should be repeated at reasonable intervals. Time has not changed the character of smallpox. In unvaccinated persons it is the same deadly disease that it was in ancient times. The fact that vaccination prevents smallpox is beyond question.

ONE ON BYRUM—STRAIN UPON IMAGINATION OF PHYSICIAN WAS FATAL.

Editors Note.—The following "obituary" was handed in to the News-Herald from the office of Dr. H. H. Wilson. It is an aftermath of a paper read at the Doctor-Lawyer Banquet Saturday night by Dr. J. M. Byrum, entitled "Some Current Events 20 Years Hence." In that paper Dr. Byrum made a prophecy touching the careers and fates of prominent men in Shawnee which his associates in the profession think made a severe tax upon the doctor's imagination.)

Gone to Rest.

Dr. J. M. Byrum passed away this morning at 4 o'clock at the Shawnee general hospital. His death came as a surprise to his host of friends, he having only been ill since yesterday at three p. m. He suffered an acute attack of Ciento-Appendo-Imaginitis. His suffering was necessarily severe and of short duration. The strain on his imagination was conceded to be the immediate cause of his demise.

Dr. Byrum was born in Izzard Co., Ark., where he grew up to early manhood. He received his early training at "Yapps" crossing under the tutelage of "Zeb White," the Possum hunter. Zeb taught that the world was round, or square, to suit the occasion. He earned the money with which to secure his medical education by running a jitney from Yapps crossing to Yahoo center. He oozed into Oklahoma, and Pott county, early in the twentieth century. Having located at Asher, he fought, bled and died professionally, and some six years since removed to Shawnee, where he became famous as an auto-diagnostician. He practiced his profession in Shawnee until some months since, when he was stricken with a severe attack of imaginitis, the real beginning of the malady that terminated his brilliant career.

"Death loves a shining mark."

Cherokee, Oklahoma.

Dr. C. A. Thompson, Secretary Muskogee, Oklahoma.

Dear Doctor: I think that Mr. C. L. Wilson, Editor of Cherokee Messenger, is to be commended, not only for refusing to allow the ad of these "quack" doctors to appear in his paper, but for the enclosed article published last week exposing same to the public. Copy this article in the State Medical Journal if you think it would be of interest to the readers.

Fraternally,

L. T. LANCASTER, Secretary.

LOOKS LIKE ANOTHER FAKE.

We observe that an advertisement headed "Interstate Doctors" announces that they will be in Cherokee at a future date.

This advertising was offered to this paper. It was not accepted but instead we took the privilege of notifying the advertising agency that it would under no circumstances be accepted unless the amount to be charged for it was either advanced or placed with one of the local banks subject to their paying same when the service was rendered, and that the business was not desired nor solicited until investigation would determine the parties to be reputable. The advertising agency forwarded us a draft for \$3.00, with instruction "if for any reason the service would not be given to return by return mail." The request was complied with; the \$3.00 was returned and the proposition turned down.

The "Interstate Doctors" ad does not name any individual that will fill this date. We don't know who it is. We have some idea, and if our conclusions are correct, he is a rascal. We may be mistaken but don't believe we are, and further believe it is the same party who tried to get this past us personally and we turned it down. The ad states that "they are licensed to practice," but it would have more the appearance of honesty if they would put some name to it. Our local physicians have to stand on their reputation and do not conceal their names to try to graft people, as it looks to us like this outfit was trying to do. We do know that many people have been deceived by this class of advertisements—one instance where the party was really irresponsible in business transactions, but possessed a physical ailment. Such fellows deserve to be tarred and feathered for their deception and quackery.

License to practice does not guarantee the honesty of these foreign quacks and fakes. Some of the lowest down rascals on earth have been licensed to practice medicine. We have confidence in the physicians of Cherokee to state that we candidly believe that if you ask them they will tell you yes or no to the query of "can you cure me?" We do know of some having done that. They will also give you a conscientious reference to a reputable and renowned physician who will tell you if you have or have not an incurable ailment or can be given some relief. It is much better for you to trust your family physician for advice than to take chances by listening to these oily-tongued strangers, who may have no other object in view aside from separating you from your hard-earned money.

If Mr. "Interstate Doctors," or whoever it may be, will call on us when he, she, it or them fills that date, and we have misrepresented in any way, we shall cheerfully retract, correct and make right doubly any statement, but suggest that they approach us civilly.

SOUTHERN MEDICAL ASSOCIATION RESOLUTIONS

Muskogee, Oklahoma, Dec. 2, 1915.

Dear Doctor: I beg to call your attention to the enclosed resolutions passed by the Southern Medical Association at its meeting in Dallas Texas, in November. This resolution is self explanatory.

Whether or not you are an ardent advocate of preparedness, it seems that the powers that be are taking steps to see that the nation is prepared for defense. We do not wish a repetition of such conditions as existed in our last war, consequently it behooves every physician and surgeon to use his influence with the view of giving the soldiers of the United States the best medical and surgical services that can be rendered and which are their just dues. The only way we can do this is to immediately take this matter up with our representatives in the Senate and Congress and demand that this military measure carry with it provisions for sufficient number of medical men to look after this contemplated army.

Trusting that you will take this matter up with your County Society and that action be not deferred, I remain, with best wishes,

Fraternally yours,

J. HUTCHINGS WHITE, M. D., President.

RESOLUTIONS.

Whereas, the President and the Honorable Secretary of War have announced in the public press that a scheme for the reorganization of the Army will be presented to Congress at its coming session, which will materially increase the military establishment, and

Whereas, we recall the indignant protests and criticisms of the Nation at the failure to provide adequately for the sick and wounded at the beginning of the Civil War and the Spanish-American War, and

Whereas, it is known that this failure was due to the lack of a sufficient number of medical officers in the regular army and a means for increasing the medical establishment at the outbreak of war, and

Whereas, in spite of the lessons of the Spanish-American War, which were fresh in mind in the reorganization of the Army in 1901, the Medical Department was not properly increased and no provision was made for its expansion in time of emergency, and

Whereas, to correct the defects in the 1901 legislation, subsequent legislation was necessary in which the medical profession of the United States was called on to assist.

Therefore, be it resolved by the Southern Medical Association, in session at Dallas, Texas, that the Secretary of War be petitioned to make adequate provision in the reorganization of the Army about to be presented to Congress for a sufficient number of medical officers for the regular establishment, which provision should aggregate a proportion of medical officers of, at least, seventy-five hundredths of one per cent. of the enlisted strength of the Army, or such number as the Surgeon-General of the Army may deem necessary, and

Be it further resolved that the Secretary be petitioned to make provision in this reorganization for the expansion of the Medical Department at the beginning of War, by calling into service in the Medical Reserve corps physicians from civil life who have been instructed in their special duties as medical officers in our Summer camps, and otherwise, as the War Department may see fit.

THE DOCTORS' DIAGNOSIS.

A physician in a certain town received a letter from one of the large mail order houses, asking why they did not find his name on their list as a customer. He replied with the following answer to the inquiry:

"Your letter of recent date asking why I do not trade with you received, and you ask me to tell you frankly why, I will give you a few of the large number of reasons.

"First.—I am in business in this community and am looking to this community with its varied industries for my support. I cannot ask the merchants of this town for their support if I do not give them mine.

"Second.—In looking over my books I fail to find either Mr.— or other of the company's names, which reminds me that none of these gentlemen have ever given me a penny's patronage. Why is this? Am I too far away or has none of them needed a physician, or are they afraid of the mail order plan when it comes to the practice of medicine? I can certainly give as good satisfaction by mail as your house can, and will appreciate a call from any of them when in need of medical service.

"Third.—In looking over the subscription list for improving our streets and public highways I have failed to find the name of any member of your firm down for a penny to assist in the work. I have failed to find their names on any of the charity lists where help has been rendered to our poor; in other words, you are not down as a contributor to our Helping Hand Society. In fact all of the

movements for the betterment of our conditions, where our community has needed the united efforts of her public-spirited citizens I have failed to find your names among the list of our contributing merchants. Your names are not on our city tax books, nor do I find where you have paid a city license to do a mercantile business in competition with our home merchants.

"These are a few answers to your questions and I trust you will see the justice of them."

—Helena (Okla) Star.

NEW BOOKS

In this department publications sent THE JOURNAL will be acknowledged as they are received. Reviews of new publications will be made only as space and time permit. Publishers are requested to bear this in mind in forwarding books, etc., for review.

EXERCISE IN EDUCATION AND MEDICINE

Second Edition Thoroughly Revised

EXERCISE IN EDUCATION AND MEDICINE. By R. Tait McKenzie, A.B., M.D., Professor of Physical Education, and Director of the Department, University of Pennsylvania. Octavo of 585 pages, with 478 illustrations. Philadelphia and London: W. B. Saunders Company, 1915. Cloth, \$4.00 net; Half Morocco, \$5.50 net. W. B. SAUNDERS COMPANY, Philadelphia and London.

PRINCIPLES AND PRACTICE OF OBSTETRICS

New (2nd) Edition, Thoroughly Revised

PRINCIPLES AND PRACTICE OF OBSTETRICS. By JOSEPH B. DE LEE, A.M., M.D., Professor of Obstetrics at the Northwestern University Medical School. Second edition, thoroughly revised. Large octavo of 1087 pages, with 938 illustrations, 175 of them in colors. Philadelphia and London: W. B. Saunders Company, 1915. Cloth, \$8.00 net; Half Morocco, \$9.50 net.

The gratification of finding a book that merits unqualified endorsement is as great as the opportunity is rare. Consequently, the writer is delighted to be able to chronicle the fact that such a book is before him.

Ten years ago the materials for DeLee's Obstetrics was in process of accumulation. His lecture notes were to be obtained only in the form of mimeographed outline form, and these notes were eagerly sought after, and highly valued by students in all the Chicago Medical colleges. Many of these students gladly availed themselves of the privilege of the special practical course in Obstetrics at the Chicago Lying-in Dispensary, and there came to more fully appreciate the DeLee technic, which attained such remarkable results in such unpromising surroundings, and there also obtained an illuminating glimpse of the methodical care with which the great mass of material was being abstracted for use in the book that was to be. Inexperienced as they were, they could realize that this work was to be no cut and dried affair, no compilation; that its information would be exact, comprehensive, methodical, interesting, workable and largely original; the masterpiece of a man who combines in one person two rarities, the genius of abstract thought and the genius of common sense.

In this instance anticipation has been surpassed by realization. The book must be seen to be appreciated. The subject matter and the illustrations speak for themselves as no other voice can speak for them. To those physicians interested in obstetrics, be that interest slight or great, I wish to say with all the emphasis at my command, that a careful examination of this book will amply repay for the time spent, inasmuch as it will lead to a desire for ownership.

B. H. B.

THE MEDICAL CLINICS OF CHICAGO

Volume I. Number II. (September, 1915)

THE MEDICAL CLINICS OF CHICAGO. Volume I. Number II. (September 1915). Octavo of 194 pages, 44 illustrations. Philadelphia and London: W. B. Saunders Company, 1915. Published Bi-Monthly. Price per year. Paper, \$8.00. Cloth \$12.00.

The noticeable features of this volume are: "Tuberculous Meningitis," by Isaac A. Abt, with a description of the Permanganate Test of Kubel-Tieman for the amount of organic sustenances. This test, while not always needed in diagnosis of this condition, might prove extremely valuable in the differential diagnosis of this affection, and is not very difficult of application. "Heart Disease in Pregnancy" is considered, among others in the Clinic of Frederick Tice. "Splenomyelogenous Leukemia," and "Syphilitic Arthritis," both always extremely interesting subjects, are considered by Robert Preble, who reports improvement on the administration of benzol in the former. "Locomotor Ataxia," by Ralph C. Hamill; "Tubercular Pleurisy" by Charles Spencer Williamson, and "Duodenal Ulcer" by Chas. A. L. Mix, are given consideration. The issue is a good one.

REGULATION OF THE PRACTICE OF MEDICINE

Compiled by the Medico-Legal Bureau of the American Medical Association. Bound in legal buckram with stamped leather labels; 504 pages, 6 1-2 by 9 1-2; price \$6.00 postage prepaid. Press of the American Medical Association, 535 North Dearborn St., Chicago.

This work includes a list of all Supreme Court decisions, both State and Federal, on this subject, arranged chronologically by states, with reference to the Court Reports in which each decision may be found. This list alone, to the State Board Secretary or prosecuting attorney, is worth many times the price of the book. Abstracts of 267 of the most important decisions, arranged chronologically by states. A digest of the subject, considered topically with copious references to the ruling cases under each head. An analytical index, giving references to appropriate sections on each topic. Every physician, attorney and others having the consideration of medico-legal matters should obtain this work. The investment in a copy by each county society of the State should be a routine matter with the officers. Inasmuch as the Oklahoma Association has recently undertaken the defense of malpractice suits, the possession of copy of this work should be the order of the day. One experience in a malpractice suit will convince the physician that the average attorney has all the law, especially in detail, to learn over or become acquainted with for the first time. This is not a reflection on the legal profession, but an assertion that they are not more human than physicians, who must certainly acquaint themselves with the details of a trouble when they have first seen it, and, as a rule, not before. We believe that this book will be found the most authoritative and up to the moment yet issued.

MURPHY'S CLINICS FOR AUGUST 1915.

The author is to be congratulated on the recent change in his "Clinics." The addition of Dr. G. P. Skillern, Jr., to his staff, also the use of a summary preceeding each article, which is a great time-saver for the busy practitioner in looking up certain points, is to be commended. Following are a few of the interesting subjects in this issue: "Talk on Syphilis," "Tumor of the Parotid Salivary Gland;" "Carcinoma of Lower Lip of Submaxillary Lymph-nodes—Excision of Cancer-Bearing Area—Plastic Restoration of Lip;" "Early Carcinoma of Lower Lip—Radical Excision;" "Ancient Fracture of Skull—Osteoplastic Exposure—Fascia-fat Transplant Into Dura;" "Tuberculous Meningitis;" "Subungua Carcinoma of Finger—Amputation—Metastatic Carcinoma of Axilla—Dissection of Axilla;" "Ununited Fracture of Humerus—Implantation—Musculospiral Paralysis From Section of Nerve—Neurorrhaphy;" "Metastatic Thymus Tumor in Breast—Amputation;" "Traumatic Cervical Spondylitis—Cervical Neuritis—Alcoholic Injection of Great Occipital Nerves;" "Cholelithiasis—Acute Hemorrhagic Pancreatitis—Incision and Drainage—Pancreatic Cyst—Deferred Marsupialization of Cyst;" "Fecal Fistula With Chronic Recurrent Appendicitis—Removal of Appendix—Cure of Fistula;" "Papilloma of Bladder—Suprapubic Cystotomy—Resection of Mucosa with Cauterization;" "Fracture of Internal Semiluna Cartilage—Villous Synovitis—Excision of Cartilage." J. H. W.

THE CLINICS OF JOHN B. MURPHY, M.D.

Volume IV. Number V. (October 1915).

THE CLINICS OF JOHN B. MURPHY, M.D., at Mercy Hospital, Chicago. Volume IV., Number V., (October 1915.) Octavo of 228 pages, 56 illustrations. Philadelphia and London; W. B. Saunders Company, 1915. Published Bi-Monthly. Price per year: Paper, \$8.00. Cloth, \$12.00

I am glad to see a series of articles in this "Clinics" on the subject of Cancer. The knowledge which the average practitioner will glean from each number would more than compensate him for the expense of the entire year's subscription.

In the October issue the articles of "Carcinoma of Gum and of Submaxillary Lymph-Nodes—Excision of Cancer-bearing Area;" also "Carcinoma of Tongue and of Submaxillary Lymph-Nodes—Amputation of Tongue and Excision of Cancer-bearing Area," emphasize strongly the importance of early diagnosis in these cases. This issue also contains an interesting article by Dr. William B. Coley, of New York City, on the use of Mixed Toxins in a case of "Inoperable Recurrent Carcinoma." There are also many other good articles. Among others several on "Old Fractures," one on "Pericholecystic and Periclonic Adhesions—Release-Omentoplasty; Obliterate Appendicitis and Pylorospasm—Appendectomy;" "Pyonephrosis—Incision and Drainage—Subsequent Nephrectomy;" "Ureteral Calculus—Ureterotomy—Removal of Calculus;" "Metastatic Arthritis of Knee-Joint," and a talk on "Autosensitized Autogenous Vaccines." J. H. W.



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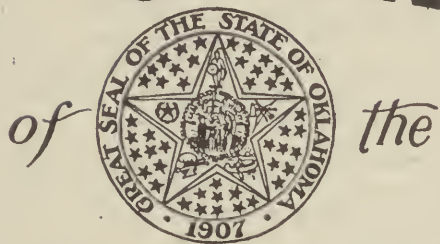
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SPLANCHNOPTOSIA*

BY T. J. MARTIN, M. D., OKLAHOMA CITY.

The progress of the science and art of medicine has been a steady march onward to the present day. The technical vocabulary has been enriched by many descriptive words and many a useless word has been picked up on this journey. The advance in many fields has been the elimination of certain symptom groups from the special class where it formerly existed. It has been the placing of varied complex symptoms and signs into the more definite and specific disease class. It has been due in part to the gradual narrowing of the scope of the word screens by which we medical practitioners hide our ignorance. Thus, from grouping every vague, indefinite, acute pain of unknown etiology and pathology, as rheumatism, we have gradually classed them as focal infections as in the tonsil, or teeth, or colon or elsewhere.

The group of diseases formerly called diabetes has been so depleted that the word today carries little of diagnostic significance and that much overworked word neurasthenia is gradually nearing the limit to its number of diagnoses.

In this paper it is not my object to prove a new theory or to advocate the existence of a new disease, but simply to show the frequency of certain phases of a symptom group and suggest their probable etiologic connection. In this class of diseases we are dealing not only with the definite, the tangible and easily discerned cases, but with vague, undefined and puzzling symptomatology. Many of these drift to the charlatan, the medical quack and faith healers. Our neglect to fully study these cases brings prosperity to the illegitimate medical man, to the devotees of all pathies with which our land is blessed.

In the time of Aesculapius the number of diseases were few and the remedies definite. Since then the number of diseases have been rapidly increasing in volume and the definiteness has been growing less and less. This means progress of medicine and to this progress we must add the spirit of the oath of Hippocrates—that is, that each will follow that system of regime which he considers best for the benefit of his patients. Therefore, let us study the pathology of these vague symptoms that we may relieve them.

Recent bacteriologic advances have opened many interesting fields, for instance, in the study of the dental flora the transmutation of bacteria was established. This means that bacteria under various conditions of culture media and surroundings may vary greatly in nature. Next, the dentists have shown that systemic disease, including rheumatism, neuritis and other vague disorders, may be caused by mouth infections.

*Read in Section on General Medicine, Mental and Nervous Diseases, Bartlesville, May, 1915.

Aberle, Rollet and Oppoltzer were the first to recognize and describe visceralptosis. The Italian, Morgangi, later in the 18th century, described the anatomy of this disorder. Virchow, fifty years later, writes of the digestive disturbances of this disease, and Frantz Glenard, in his admirable work, "*Des Ptooses Viscerales Diagnostique et Monographie*," presented the subject as a clinical entity of the scope in the importance it deserves.

Beginning about twenty years ago the medical profession became cognizant of the frequency of these conditions. Previous to this time visceral displacements were regarded as a rarity and displacements of the colon were considered unimportant. Displacements of the kidney was the subject of learned discussions of anatomist rather than clinicians. Glenard's work promoted clinical recognition of the change of organ position as a pathological physiology.

The viscera of the body are held in their respective positions by a number of different forces, namely, (1) the negative pressure in the thorax acting in the diaphragm; (2) by special ligamentous, nerve, vessel and peritoneal attachments, (3) by the visceral pressure of other abdominal organs; (4) the visceral shelves and most particularly by the muscular, fascial, and osseous make-up of the abdominal walls assisted by atmospheric pressure exerted from without. Physiologically, no organ is absolutely fixed but is free to move and make possible changes necessary in functionation, the only fixed area in the abdominal cavity being the *radix mesenterica*.

The embryology of the abdominal viscera is of interest because many regard this disease as a reversion of the embryonic type. In the embryo the intestinal tract is a straight tube extending from the mouth to anus. The caecum passes from the left to the extreme right across the duodenal region. The liver moves from the middle line to the right proximal quadrant and is here at birth. In the adult this organ reaches to the dome of the diaphragm thus, it is seen that the low and central position of these organs in embryonic life is somewhat similar to their position in the prolapse.

A congenital predisposition of abdominal ptosis is seen in the characteristic body form in the fragility of tissue and debility of nervous energy that frequently characterizes the individual from the cradle to the grave. This condition is found in children and close observation will prove the modes of life, vagaries of appetites, and even the illnesses of childhood are correlated in cause and effect of the later splanchnoptosis.

The sudden loss of fat tissue, extraction of abdominal fluid, the removal of tumors, the traction of adhesions on movable viscera, the evil effects of improper habits and all types of chronic infectious diseases, are frequently the proximal cause of this disorder. The relationship of the positive cause of a paralytic anterior wall has well been shown by Robinson, who proved that by removal of the musculo-fascial wall, with the body in erect position that the neuro vascular pedicles do not support the organs but only limit and direct the descent.

In the chronic diseases, the general devitalization of tissue (tuberculosis, typhoid and other chronic infectious diseases), extends to the abdominal musculo fascial wall and allows the descent of the internal organs to a lower level. This, plus the vis a tergo or distending pressure within, causes a permanent development of splanchnoptosis.

The great frequency of tuberculosis among all kinds and classes of people and in many of these the finding of splanchnoptosis, makes these two interesting conditions often coexist in the same individual. This raises the interesting question of whether the tubercular predisposes the splanchnoptosis or whether splanchnoptosis predisposes the individual of the tubercular acquisition. Keith, in the London Lancet, blames faulty respiration as a basic reason for visceralptosis and states that all other factors are secondary to this one.

Tight lacing as a factor in this disease is interesting. The fact that Einhorn found only 6 1-2 per cent. of males and 33 1-3 per cent. females suffering from the trouble suggests dress as a possible cause. On the other hand, Fuhs states that unmarried Swedish girls who have never worn corsets are frequent sufferers of this condition and the same is true of the Arab women. This should make us cautious in blaming tight lacing as a causative agent.

Bassler, in the series of 1909, found 1-3 of all cases presented at his clinic for gastral or intestinal disorders had the splanchnoptosis and that 5 per cent. of his gastral disorders were blamable to this cause. These visceral displacements are liable to cause disease from many reasons: (1st) from local or segmental stasis, varying from day to day; (2nd) from the chronic congestion and inflammation (irritative or bacterial); (3rd) from the absorptions of bacterial toxins or toxins of digesting mass; (4th) from the irritation from disturbed innervation. The first, that stasis produces symptoms, I believe, is too universally admitted to be discussed. This train of reasoning holds good in segmental stasis as well as obstruction. The second, that chronic gastritis, with its associated symptoms follow stasis, is also not necessary to prove. The third, absorption or non-bacterial toxins, the work of Murphy and Brooks as reported in Archives of Internal Medicine of March, 1915, on Isolated Drained Intestinal Loops, show that (a) the discharge is of a thin fluid. (b) This is non-toxic of the animal while the bowel is healthy. (c) It is toxic when injected in other animals. (d) The absorption of this fluid through damaged mucosa leads to toxic symptoms. The fourth, the stress and strain on the neuro vascular pedicle of dislocated abdominal viscera undoubtedly causes both local and general disturbances. It causes a local disturbance usually of a type of chronic catarrh. It causes a general disturbance of a type of neurasthenia.

Bacterial toxins doubtless play important parts. It has been wisely said: "A colon bacillus is not a colon bacillus when busy in some other portion of the anatomy than the colon," which we may paraphrase into: "A colon bacillus is not a colon bacillus when busy in other than a normal colon." That a colon bacillus is a versatile organism is well known. That it may be developed to a motile organism. That it may be broader and thicker or longer and shorter according to its culture. That it may give forth a foul smelling pus or it may produce a pus of little odor. Dr. Williams in the Archives of Diagnosis for January, 1915, discusses at length these exaltations of colon bacillus and concludes that the true chronic colon bacillus infections of the bowel exist and are an infection of the bowel wall rather than of the mucous membrane. That a institial tissue rather than the mucosa is the path for an infection. That these infections are more common in women subject to exacerbations and especially prevalent in teachers and shop-girls. That the infection varies in virulence in different individuals according to individual resistance and bacillary virulence.

The toxic and nervous phenomena are characteristic though other functional disturbances may exist. In gastropsis the test meal more often shows a hyp acidity. Many practitioners and many books foster the idea that splanchnoptosis and hypochlorhydria are associated terms. This is not true and closer observation will show nearly one-third of the cases of ptosis of the stomach have accompanying hypochlorhydria. One case may show symptoms of certain functional disorders and another case present a different physiologic picture with the same anatomic displacement. Splanchnoptosis, like neurasthenia, is at present an indefinite disease; its existence is established. The symptoms it causes, whether they be definite and severe or indefinite and unnoted, require closer observation of medical men. I hope by this paper to have interested this section in a more careful observation of the abdominal cavity in that large group of patients with an indefinite symptomatology.

CONSERVATION OF HEALTH.*

BY JOHN W. DUKE, M. D., GUTHRIE, OKKA.

The nation's greatest asset is the health of its citizens. Wealth without health means nothing and presupposes that man could enjoy and profit by it without health.

Where one admits the existence of a Supreme Being of the Universe, or is pleased to believe that the created world as man has found it is the result of unfathomable design, the conclusion is inevitable either that the world was created for man, or that he is the principal cause of its development.

We must accept the world as we find it, with its over-reaching firmament and the earth beneath; with its changing seasons; the nights and days; the vegetable and the animal life; the land and sea, together with its vast treasures of minerals, chemicals, etc., as being made by a Creator, possibly for the use of man—not man for the environment, but the environment for man. Geology, like the Bible, leads us to believe that our earth at first was without form and void; that it was covered with water; that after a time stretches of land appeared above the water, barren at first, then occupied by vegetable life, then by animal life and, then by man.

What happened in primitive days is still occurring in these days; with selfishness on the part of the individual. When the primitive man lived for himself, with his mate and his offspring, he had no sense of obligation other than providing for his immediate necessities. Other individuals and the future was left entirely alone. Times of famine and want were not anticipated. The sharing of one's possessions with his neighbor was not considered, consequently millions upon millions perished. However, as he developed he found that he could, by drying his meats in the sun, provide against the season when it would be scarce; by tilling the soil and growing seeds he could provide and store foods for the winter by combining with his neighbors, and his neighbors' neighbors, all these things could be done to a great advantage, and by banding together in a community these results could not only be better accomplished but they could more effectively protect them against the destructive effects of the elements, and the invasion of their common enemies.

In time the value of the division of labor dawned upon mankind, and it was found not only to the advantage of the individual but to the community as well. Certain individuals were delegated to perform certain duties, and to prepare themselves to devote their time to certain avocations. In this way an increase in the output of the world's food supply was developed. This also developed shoe makers, clothes makers, farmers, manufactures, lawyers, physicians, bankers and ministers of the Gospel.

It was not infrequent in those days of primitive man for the good of the majority to be sacrificed to one's own selfish ends, and it must be admitted, to our discredit, that the same processes are going on today.

Viewing this in the light of history, and the enlightenment of centuries, we see their mistakes and errors, and condemn them as we do the misdeeds of our friends and neighbors against their neighbors and friends. An enlarged viewpoint compels us to condemn such practices and we accept the lessons taught by the advance of civilization.

It would be impossible to speculate or to anticipate to what extent, under what duress, a man might utilize, even for a time, what should be left for a neighbor and his neighbor's children, or his children's children. It is clear, however, to even those who think but little upon the subject, that we have received a generous benefaction from our ancestors, and that it is our duty not only to give as much as we have received to our descendants, but a great deal more.

*Read in Section on General Medicine, Mental and Nervous Diseases, Bartlesville, May, 1915.

Every man is entitled to live, but not at the expense of posterity. Waste necessarily does harm to the individual, to the household, and to the nation. Education and the development of moral codes, the birth of religion, and the increase of the population of the human species have all played an important part in teaching us toleration, generosity and altruism. Man has learned that forests are of great value; that they are pleasing to look at; they are for shelter in times of need; they influence the rainfall, and they furnish wood from which we build our homes and supply our industries, and fuel to keep us warm, but they cannot furnish us food. Only the fields of corn and grain can do this. If the whole earth were a forest each man should be entitled to destroy just enough of it to furnish him land upon which to live, but he should not be permitted to destroy the forest beyond this point.

The same applies to the streams and minerals and other products of earth of which nature is so bountiful. The conservation of all these things is good and should be taught to our children. It is conceivable and altogether possible that primitive man was free from disease, and that if he were injured, if not mortally wounded, that nature would effect a cure, but with the increase of individuals disease developed and multiplied.

It was first believed that disease was a displeasure of God. Education, however, has taught us it is due to our disregard and ignorance of the laws of health, therefore we have come to the belief that the civilization of a nation may be measured by its standards of health.

Our government has conserved about everything in our country except human health. It conserves the streams, its lands, its forests; and its animals, but man, for whom all these things should be conserved, is neglected or left for the last consideration.

Our government constantly directs its paternal care of our streams, our forests and our mining resources, but man is still neglected in so far as health is concerned. It is surprising and remarkable to me that practically all the measures for the uplift of humanity, in matters of health, have originated with the medical profession. If physicians were as black and as cold and as selfish as some have painted them, they would spend all their spare time in praying for epidemics rather than in preventing their spread.

It is an inconceivable fact that in the United States 1,500,000 people are constantly ill with preventable diseases, which means a monetary loss of approximately \$1,500,000,000. annually. Furthermore, that a large percentage of all of those who die are destroyed by preventable diseases. The important problem which confronts us, therefore, is how may this dreadful and needless loss of life and property be prevented in our country. Any solution of this problem must be adapted to our form of government for, after all, that is the main source from which we may expect relief. Our country, when in its infancy, like all young nations, was greatly in need of proficient recruits in all departments of life. Like all enterprises in the beginning, qualifications could not be too closely looked into. The medical profession was no exception to this rule, so with our latitude of states, and absence of law, and the doctrine of state's rights, it is no surprise that inferior colleges of medicine sprang up all over our land. Naturally this led to the licensing of scores and scores of men, inadequately educated, to spread themselves over our country, and in many instances they did great harm to the health and lives of our citizens. In spite of this I wish to call your attention to the fact that at the present time, and be it to the everlasting glory of the medical profession, men can be graduated in the law, and in the ministry, and in the arts and in the sciences in far less time than it takes to be graduated in medicine. Moreover, the defects in medical education and medical training were not pointed out to us, neither by the government, nor the laity, but by the medical profession itself.

We have advanced so far in this direction that it now requires graduation high school, and not less than four years of training in a medical college before a man can be licensed to practice medicine and hold in his keeping the lives of his patients.

Most all the states passed medical laws and created State Boards of Medical Examiners to examine applicants to practice in their borders, all having for their object the preservation of the health of their citizens, and the public, against incompetency. In most part, however, these Boards have missed the intent of the act that created them, for in every state law there have been many flaws, or loop holes, through which the quack, the pretender and the charlatan could make his escape.

We have attended to our own shortcomings, however, and it remains for the public to support us in this present great undertaking of preventive medicine. There are but few men, or women, in the world who would not place implicit confidence in any serious statement made to him, or them, by their family physician; then why not act upon this hypothesis and accept the conclusion reached by these men collectively, and prevent the death roll of preventable diseases?

Cholera, yellow fever and smallpox have already been banished from the face of the earth as scourges, and by whom? The nation? The state? The police? No. By the men who might have profited by the continuance of these epidemics that carried off thousands and tens of thousands of their fellow beings.

The problems which further confront the medical profession of America are disastrous. Malaria is prevalent in our land over a large territory, and it cannot be eradicated in many years to come, if ever. Our streams will become polluted and carry typhoid fever from one place to another. Tuberculosis continues to spread, recognizing no state, no state rights, no borders. Pellagra has no regard for individuals but places its blight upon the high and the low, and the hookworm we still have with us.

What should be done, and what can be done to stamp out these plagues? There can be but one remedy—a National Department of Health. In diseases that travel from state to state; in diseases that can jeopardize the welfare of a commonwealth as of old, state lines ought not to be considered.

I do not wish by this statement to under-value the efficiency of the state, county or municipal health departments. They are needful in the development of the whole, and should always be highly organized. They are for the good of the state and the community in which they exist. They should hold the same relation to a national department of health that our states do to our national government.

The responsibility of the health regulation of the county rests first upon the Health Officer of the county, but that does not excuse the individual physician. One of his first duties is to notify the health officer within twenty-four hours of the presence of any infectious disease. By doing this the spread of such diseases is prevented. Every physician should instruct all his patrons that it is their duty to co-operate with him in this matter. To neglect this rule is very often the cause of the spread of epidemic and contagious diseases.

Every physician should act in the capacity of a teacher, preacher and health superintendent.

Next in importance to the suppression of the spread of contagious diseases is sanitation. Bad sanitation often causes needless sickness, pain and death. The spread of typhoid fever and other diseases could be prevented by the observation of a few simple sanitary regulations. Our responsibility is not limited to the individual member of the family who is sick. No effort should be spared by the physician to prevent the spread of communicable diseases.

On sanitation rests the success of the fight made against pellagra, hookworm disease, tuberculosis, and all other troubles of this kind. Tuberculosis now,

as of old, is killing more people than any other known disease. Thousands of these deaths could be prevented by simple sanitary measures. Whenever a physician sees a case of tuberculosis he should take immediate steps to properly instruct the family how to prevent the progress of infection. Most people will appreciate and heed such advice. Of course, a few will become greatly offended and call another physician, but this should not deter the physician in the performance of his duty.

Our Association can promote public health by rigid enforcement of the quarantine laws; by teaching the people that vaccination prevents smallpox; by preaching sanitation all the time; by carrying on a war against flies and all other forms of filth; by urging the people to observe "clean-up day" by working together, and by living up to the medical code of ethics.

PREVENTIVE MEDICINE AS RELATES TO THE CHILD

BY W. G. LITTLE, Ph. M., M. D., OKMULGEE, OKLA.

The Holy Land holds many notable pictures for him whose imagination is alert, and whose knowledge makes him familiar with the scenes which history describes for us. None are more beautiful than where the Man of Galilee turned aside from the busy cares of ministering to the old sinners, and took the children in his arms and blessed them. He then announced the vision of his prophetic soul, that "These were of the Kingdom of Heaven."

In later years Peter is said to have been fleeing from Rome, when Nero was making garden torches of the followers of the Nazarene. Being met in the way by a vision of the Christ, whom he had heard teach in Galilee, Peter asked, "Whither goest Thou, Master?" The answer came, "To feed my sheep thou art deserting." Peter returned to his duty and his death in Rome, because he had seen a vision.

The Man of Galilee saw the sentimental and potential worth of a child. Peter had a vision of a transcendent truth and founded a great moral force, a church. Science recently saw a vision also and the result was the founding of a great medical force, moral, humane, fundamental. So preventive medicine has become a first principle of all work for the really worth while physician.

The inane faddist type of work for the child is worse than useless. The public schools are filled with an emotional, sentimental nonsense that is wholly wrong. There are types of societies which indulge in unscientific, hurtful effort, because it is the mode to do something. The real work is done by the few in each community who catch a foundation principle and build upon that a sound, logical and effective structure.

Preventive medicine was a great vision some years ago. Faithful men in the profession began to work for a fulfillment of that high aim. The popular fancy has caught the lilt of the lightest strains, and is singing the sacredness and solidarity out of it by a thousand foolish and unscientific applications of its great principles to every possible phase of life. Like most popular works, it lops off branches but does not feed the roots. It is the duty of a thoughtful, progressive, efficient man in each community to be a leader in this work. If the child had proper care, his after life would be better and more efficient. The duty of preventive medicine to the home, the community and the state is its manifold care of the child. Its relation to the child is broad and close. An attempt to point out a few of these relations will be the aim of this paper.

A child has a right to be well born. He cannot enforce that right himself. It must then of necessity fall upon others to insure that claim. Preventive measures are necessary to that end.

The eugenist just now is theorizing endlessly. Legislatures are passing impossible laws to compel proper marriages. Cupid is to be harnessed by the law.

*Read in Section on Pediatrics, Bartlesville, May, 1915.

But the fact remains that the only good so far is to educate the people by doubtful means. Half truths are told by inference. The people should be educated by living words from living teachers speaking with the authority of an abundant knowledge. Let legislation follow based on demonstrated scientific fact. The eugenic marriage laws so far will not remove the venereal evil to the child. They are impractical. The political rottenness of the average city, and especially of the men and officials, is at the bottom of most of the venereal evil. If the decent and enlightened people demanded clean towns generally an eugenic marriage law might not be needed. If "John Doe" was never allowed to register in the court records, "Willie Smith and Susie Jamison" might not have gonorrheal ophthalmia. Congenital lues would be less prevalent. Again, if Dr. Brown had carried some protargol or silver nitrate solution when he attended Willie's mother, and had used it, Willie would have been spared his grave affliction.

Poverty, ignorance and uncleanness have much to do with the life of the child before and after birth. Poverty blights the mind, weighs down the spirit and opens the way for all manner of evil influences to the mother. The child is presented to the world under conditions which preclude even ordinary care. With poverty may be uncleanness. This opens the door to disease. Ignorance may be and often is associated with those opulent in this world's goods. Ignorance of the care, needs and hygiene of the child is the fruitful ally of the undertaker. The doctor may talk proper methods of care for the child when he attends its illness. That is merely pursuing the world old method of attacking the branches instead of the roots of the matter. Poverty may be unavoidable; uncleanness is a matter of personal choice. Ignorance may be imposed, but usually it is accepted as the way of least resistance. It should be met by enlightenment. To this end the medical profession should enter as a leader and educator. The church, the press, the school and the public should be enlisted. Educative articles should be prepared and printed in the papers of the towns. The school house should be a social centre where a well prepared physician could give lectures on "What to do till the baby comes" and "How to treat him after his arrival." The church through its various agencies should open its doors to health lectures. They are as much of religion as a vast amount of the things carried on as religious. The feeding, clothing, bathing and general hygienic care of a child would be an intensely interesting and educative study for both physician and layman.

Then come the years of early school life. How often in these, the seeds of disease are sown! How eager seem the parents to push out the "tiny tots" from the home nest and home life into a kindergarten, or somewhere to learn something. This kindergarten may be indoors or outdoors. The tasks are set. Lessons are to be learned, attention demanded. The carefree, natural spirit curbed and repressed. So early, before the joyous childhood has begun, are the routine duties of life imposed on childhood. The eyes are on strain, the nerves are on tension, the muscles are set in staid attitudes. All of this that the "tiny tot" may learn something. Or so early are the music lessons started. This is wrong, all wrong, mentally, physically and morally for the average child. A few of the great city slum denizens are perhaps benefited. If children were not put into school till eight or nine years of age, with a little teaching at home by parents or others interested, the nervous wrecks of after life would be fewer. The mental development of the "teens" would be sounder. "The cry of the children" goes up, working in the factory at tasks. Why make the schools taskmaster in these early years, more beneficent it is true, but a master. There is such a note of sadness in those lines of N. P. Willis, written before the time of fads, fancies and furbelows of the present day, Listen to them:

"Tired of play! Tired of play!
What hast thou done the live-long day?
There will come an eve to a longer day,
That shall find thee tired but not of play,

When thou shall lean as thou leanest now
With the drooping limbs and aching brow,
And wish that the shadows would faster creep
And thou couldst go to they quiet sleep."

We have no right to rob a child of his carefree childhood. As a prophylaxis against future ills, his home life of play, little tasks and a little teaching, conserves his energy for the real work. Were he to remain from the school room till seven or eight years of age he would be sufficiently hardened that he could carry the work without physical or mental injury. He would outstrip the child who began "learning things" at four or five years of age. Men of eighteen or twenty cannot be hardened into soldiers as can men of twenty-five. Neither can the child of three to six be seasoned into the work of the school safely, as can the child of eight or nine.

Preventive medicine has a vital relation to the child in yet other ways. After he becomes of a school age it is necessary that his life be guarded in every way. No longer can the parent direct this care personally. The public servants having charge should use wise measures in constructing buildings that proper lighting, ventilation and general sanitation be procured. The general health of the child should be looked after. This is done in a superficial way by the medical inspector. But the greatest benefit is lost sight of in that there is a complete failure to provide adequate teaching of personal hygiene, physiology and sanitary rules of health. This should be done by a medical practitioner. The average schools have physiology in the eighth grade. The high school has nothing in that line. A medical lecturer should be provided for these high school grades, who would give a thorough, scientific course. The teachers of the country should have an obligatory course also on this same line in their country work, enabling them thus to know the ground work and fundamental principle underlying the recommendations for medical work for the individual child.

The architect decides most questions of construction of buildings. No question is asked by boards as to whether a plan is in accordance with rational and accepted theories of sanitation. Again, the prevailing fashions for women's dress make it imperative to have over-heated rooms which again is a menace to the health and mental activity of the children in the schools. Many more points of interest relating to the child in school come naturally for consideration—play, sleeping, seating, light, ventilation, clothing, food and drink. The personal aptitude or inaptitude for mental work, none of these are considered by boards, principals, or teachers, except in mass, which is wholly wrong. The child is consigned individually to the public school, and in that manner should be cared for by intelligent officers, looking diligently after these elements, for the congregation of many under one roof increases the dangers to the individual and entails the greater responsibility upon the board and teachers. The old Greek plan is the best, where the teacher took her class out under the heavens, into the fields and forest, and studied everything in the wide world with an intensified interest and ever-widening knowledge. Few present day teachers, I fear, would read far in the great book of nature.

In many sections politics dooms children to ill health, early graves and a short life of unhappiness. Legislators, as a rule, favor the interests having money to spend. Few act from the incentive of honesty, virtue and the friend of the unprotected. Childlabor is a crying shame of the present age in many sections. Years ago Mrs. Browning voiced the "Cry of the Children"—

"Do you hear the children weeping, O my brothers,
Ere the sorrow comes with years?
They are leaning their young heads against their mothers,
And that cannot stop their tears.
The young lambs are bleating in the meadows;
The young birds are chirping in the nest;

The young fauns are playing with the shadows;
 The young flowers are blowing toward the west;
 But the young, young children, O my brothers!
 They are weeping bitterly,
 They are weeping in the playtime of the others
 In the country of the free.

"Alas, Alas, the children! they are seeking
 Death in life, as best they have.
 They are binding up their hearts away from breaking
 With a cerement from the grave.
 Go out, children, from the mine and from the city;
 Sing out, children, as the little thrushes do;
 Pluck your handfuls of the meadow cowslips pretty;
 Laugh aloud, to feel your fingers let them through.
 But they answer, 'Are your cowslips of the meadows
 Like our weeds anear the mine?
 Leave us quiet in the dark of the coal shadows,
 From your pleasures fair and fine.

"Our blood splashes upward, O goldheaper,
 And your purple shows your path!
 But the child's sob in the silence curses deeper,
 Than the strong man in his wrath."

Let us as progressive medical men teach in public the great principles of child conservation: "Line upon line, line upon line; precept upon precept, precept upon precept," beginning, however, on a sound basis. And, as the old world is throwing around her people the prohibition of alcohol that her men may be more fit to destroy their brothers, may we be as diligent to safeguard the lives of the children that they may be more fit and happy and efficient in the glorious works of peace and moral splendor.

COMMON NATURAL THERAPY APPLIED IN THE CONSERVATION AND IMPROVEMENT OF INFANCY AND CHILDHOOD.*

Dr. N. E. Lawson, Oklahoma City, Okla.

Every human infant has two lives, a mental and a physical, and both must be conserved, but here I shall consider only the physical.

We know that Nature is absolutely uniform in all that she does and that it is a principle of universal application that every effect must have had a cause and that every cause will have an effect, and that like causes under like circumstances will produce like results. This truism is so obvious that it needs no elaboration. The necessary mating of the fit for parenthood, the accomplishment of which may take years in educating the laity in the absolute necessity of this movement, is the beginning of the foundation upon which the whole structure of infant conservation must be constructed. This being accomplished and the mother having the proper care and environment during pregnancy, she will bear relatively a normal offspring. We must remember, however, that all of the worst, as well as all the best qualities are brought out in the infant, and here is the place for our work of refining by eliminating these undesirable qualities under the powerful influence of our most potent natural therapeutic remedy—selective environment.

Heredity has been defined as "the sum total of all past environment, and environment as the architect of heredity." It is generally admitted that acquired characters are transmitted, not necessarily at once in a dogmatic and visible form, but as an increasing latent force, ready to appear as a tangible character when any specific tendency has been fixed, and repetition is the best means of fixing these tendencies on the human infant.

Each specie and each individual has a tendency to reproduce itself in form and habit somewhat definitely after its own form, and this tendency we call hered-

*Read in Section on Pediatrics, Bartlesville, May, 1915.

ity. It is not necessarily the dark specter, merciless and unchangeable, the embodiment of Fate itself, which some have thought it to be. The dark pessimistic belief which tinges even the literature of today, comes, no doubt, from a general lack of knowledge of the laws governing the inter-action of these two ever present forces—heredity and environment wherever life is found.

It has been said that the entire body is mostly the result of inheritance, that the future of the child is determined in the womb, that local inflammation of this organ may cause mal-formation, and that women who are exhausted from over-work, worry or lack of nutrition will bear children that are not fit to be conserved. We know that inheritance is a powerful factor in the formation of the body, that the shape of the nose, the size of the ear, the color of the eyes, the complexion and other personalities are recognized as hereditary and are family characteristics, and we know also that weakness and frailties are just as transmissible to the off-spring and that disease of either parent prior to impregnation, or that any poison which is introduced in any way into the developing organism will produce either disease, mal-formation or weakened vitality. This inferior constitutionality we call diathesis, therefore most of the known diatheses are hereditary, and if the heredity of today is the environment of yesterday, then cultivate the right tendencies and the wrong ones will die out. In other words, if we build up the positive side of the child, the negative will take care of itself.

The sensitiveness of all animal life to environment is not questioned, and the higher the order of life the more sensitive it becomes. The human infant in its normal, plastic state is therefore the most highly sensitized organism that we have to deal with. No influence is so slight that it does not leave its impress on the infant. It absorbs and assimilates all the force that is brought to bear upon it, and, if this is selected and scientifically applied, we can eliminate and overcome many of our worst hereditary traits. In this, as in many other scientific health problems, we shall have to individualize each case. No two are exactly alike. They don't develop alike. They are different in tastes, temperaments, dispositions and capabilities. But individualized and with a scientific application of selected environment, repeated over and over again, they will respond where no impression would be left on any other life.

Among the chemical and physical natural forces that we have to modify and direct in infant conservation are rest and exercise, hunger and food, heat and cold, dryness and moisture and light and darkness. The sunshine from the sky is, to my mind, second to the sunshine of the human heart in its tonic effect on the plastic human infant, notwithstanding the fact that I recognize that sunshine and pure air are the Lord's tonics, and, in my judgment, it is nothing short or criminal for parents to raise, or the state to permit children to be raised in crowded and unwholesome tenement houses, under the hot roof and away from these God-given, natural therapeutic agents—pure air and sunlight—giving us hot-house plants of the human type that have to be transplanted in a different soil and climate, and because of their weakness and delicacy they don't stand the change; they can't survive because of their unfitness for growth and repair, which, however, are synonymous, as repair is only a repetition of growth, and as infancy, and especially early infancy, is the stage of most active development and the child's constitution having to sustain the stress of both growth and repair. For this reason the prolonged and profound sleep of early infancy is required, as it is during the physiological process called rest that these results are actually accomplished. Nature, therefore, calls upon the young infant to sleep about twenty-three out of twenty-four hours for the first few days after birth, and as it gets older it requires less sleep and more exercise to help open the avenues of elimination that the waste products may be thrown off and the whole organism prepared for the repetition of this physiological process of rest. This is a vital process of life and is therefore absolutely essential to conservation. The point that I am trying to lay stress upon is that the first law of natural therapeutics is that the physio-

logical process called rest is a necessary antecedent to the accomplishment of natural growth and development. This should never be lost sight of by the physician who should act as instructor to teach mothers, and especially young mothers, this important lesson. If we can instill this into their minds, perhaps they will cease to wake the baby when it sleeps too long, to see if it is sick.

The constructive and destructive, as well as the conservative properties of heat and cold, dryness and moisture and hunger and food, are so well known to you that I shall only mention them under the subject of personal hygiene, at the head of which is eugenics, or the science of raising the index of efficiency by improving the rules of life and conduct, thereby bettering the environment of the infant. This power to modify and improve the child is enormous and as yet is undetermined. The progress of this science is such that no dogmatic rules can be given. The valuable findings of medical research are constantly revising and modifying our methods. It is therefore our duty to use all the best ideas and to exercise a ceaseless vigilance wherever there are difficulties to overcome. In this way only can we obtain the best results from our efforts. The final success of infant conservation by natural therapy depends on our knowledge of the fundamental principles of medicine from the beginning of biology to the last word of scientific research in personal hygiene.

NOTES ON A RECENT TRIP THROUGH ITALY, FRANCE AND ENGLAND

BY ABRAHAM SOPHIAN, KANSAS CITY, MO.

This short article is based on a visit to some of the hospitals and research laboratories in Italy, France and England. I had at first intended to write a short description of my visit to each of the countries, especially with reference to the Policlinics in Rome, the Pasteur Institute in France, the Lister Institute in England. Instead, however, I have tried to include in this article most of the pertinent points, especially relating to gas infection and gangrene, which make the most serious menace to the wounded, and account for many deaths and much suffering.

A visit to the A. A., situated on the outskirts of Paris, was to me much more realistic of the war than the exhibits of the many captured German cannon, aeroplanes and other trophies exhibited in the city. The hospital buildings are in a large academy, which was being completed when war was declared. It was promptly converted into a hospital, and could not have been built for any better purpose.

The American ambulance looks all business; the motor ambulances lined up in front of the building (among which our Fords were very prominent); the clean cut, khaki dressed, American drivers looking very fit (recruited from some of our best families); the office presided over by an aristocratic looking American—all prepared one very well for the real work. Very soon I saw what war meant—a sight of ghastly wounds, and horrible infections, which we fortunately see only rarely in this country.

The wards which I visited have been on Blake's service and do much credit to everybody connected with them. It is a fine example of what magnificent self sacrifice, hard work and good common sense can accomplish. All credit must be given to the overworked, conscientious nurses, and administrative workers, who are volunteers drawn from the Parisian-American colony.

As I entered the crowded, busy, but quiet wards, I was struck by the general use of the overhead bed splints everywhere. I noticed the great comfort of the patients, even during the dressing, which was all the more remarkable when one saw the multiple, terrific wounds from which most were suffering. These splints can be used for all or any part of the body. I am told they were much used during the Balkan wars. They mean at first more work for doctors and nurses, but they meant life—almost more than life—relief from horrible discomfort to the sufferers.

All who have used these splints are most enthusiastic; it is a pity they are not in more general use.

A study of the wounds was most instructive. There were the recent ones admitted to the hospital before infection had set in, made up of every conceivable form of penetrating and destructive wounds of all parts of the body. Surgical experience and laboratory studies have taught that the *B. refringens* (gas bacillus) as well as many other anaerobes and aerobes, can be isolated in almost 90 per cent. of all wounds admitted. The surgeons have learned that the deep penetrating wounds, especially those involving muscles, are particularly to be feared. On the first appearance of infection; even before gas infection can be demonstrated, wounds are opened freely and widely, making free exposure and drainage to the surface, thereby preventing anaerobic conditions. Cases so treated early, even after gas has formed, but before extensive gangrene has set in, do well.

Then there are the infected wounds, the majority, already showing all degrees of infection on admission. The gas infections make very rapid advance within 48 hours of the occurrence of the wound. It is the deep, penetrating wounds involving muscles that make the bad infections which go on to gangrene, extensive gas formation and death. These are the ghastly, horrible wounds one sees everywhere. Some explain the gangrene as due to pressure; the formation of considerable gas under tension within the muscle sheath, causing pressure necrosis of the included muscle. On operation the surgeon finds the extensively gangrenous, blackened, soft, mushy, degenerated muscle, which can be removed by the handful. The gas formation is extensive, spreading widely in the subcutaneous tissue, almost under one's eye; and in case of death, within a short period of an hour or two, the body becomes rapidly swollen beyond recognition.

These are the horrible cases. The workers say it takes them a long time before they become accustomed to the sight. Such cases have always been classed as amputation cases, but they have found that if the gangrene is not too extensive (a broad word, as I considered all I saw extensive gangrene, but they were getting well without amputation), and if the general infection and toxemia is not too pronounced, many of these cases can be saved without amputation. The clean cut cases of amputation die anyway, and they say it is pretty hard to determine an absolutely safe, free level for amputation. The horrible wounds one sees are the surgeons' wounds in treating these cases. Free, wide incisions as long as the extremity in all directions, as deep as one can go, and free splitting of the muscle sheath and separation of the muscle fibres, is the secret of success. They have learned it, and they certainly apply it.

It was a revelation to me to see ghastly wounds (multiple in most cases) being dressed, with never a murmur or complaint from the soldiers. The surgeons all remark on this wonderful grit and stoicism of the French and English. Many of these cases get well. It was only the evidence of my eyes that convinced me.

There were many open, smashed-up joints—what we would consider amputation cases—getting well.

Thoracic and abdominal injuries of any severity usually die early in the field hospital. I saw a number of interesting injuries of each. Small projectile, penetrating wounds, extending from the anterior chest, with point of emergence in the back, not infrequently get well without further symptoms. More remarkable were similar abdominal injuries which were also commented upon by the surgeons in Italy, the small projectile bullets usually penetrating the whole width of abdomen, emerging in back with no after effects of any kind.

Some extremely instructive abdominal curiosities were in the ward. One patient had a small penetrating wound just above the umbilicus. He had no general abdominal symptoms, but he was watched carefully. A few days after admission he passed a piece of projectile in his stool; no symptoms of any kind developed.

Another case was admitted with severe injuries of the extremities. A few days after admission he began to complain of some abdominal pain. A penetrating abdominal wound just above the umbilicus was then discovered, from which a fecal discharge was exuding. A large localized pelvic exudate was then discovered. The patient was doing well and in no danger. How often does nature's surgery take care of undiscovered gastric, duodenal, and typhoid perforations?

Brain and spinal injuries with opening of the dura are almost always fatal of meningitis. Everything has been tried; nothing has helped. I was told of a remarkable case. A soldier was admitted with a very severe fracture of the skull, which had been dressed in the Emergency Field Hospital. The man was perfectly conscious and answered questions. When the wound was opened and the protecting packing removed, a tremendous skull defect was found with a large area of exposed brain, which began to ooze out. The man died in about twenty-four hours. Autopsy revealed one complete hemisphere of the brain all mashed up and practically destroyed; in it was embedded a large piece of steel helmet. And this man was conscious on admission to the hospital, after traveling about ten hours in the train from the field hospital.

Some of the more noteworthy points in treatment are:

1. Not to use plaster casts in any of the open wounds—the most dangerous invitation for gas gangrene infection.

2. Early full opening of penetrating wounds giving free, open drainage. In the gas infected cases with or without gangrene wide, free incision especially of the involved muscle. Amputation when necessary.

3. Application of antiseptic solutions and normal saline. Several methods have been employed:

- a. Through and through continuous drainage through drainage tubes; not altogether satisfactory.

- b. Intermittent flushing with very thorough drainage by means of suction; very well thought of by some.

- c. Continuous drip on the open wound good, but very uncomfortable and painful.

- d. Packing with thoroughly saturated gauze, changed frequently. In early stages hot fomentations being used and changed every hour. These gave exceeding good results; in combination with it the drip over the gauze was very helpful.

Various solutions are favored by the different workers. The surgeons all agree that the free opening and drainage is the most important. Most favor the hypertonic solutions; some find hypertonic salt solution, 10 per cent, as good as as anything—better than most. In the American Ambulance a number of the surgeons were very enthusiastic about the hypertonic quinine solution (Sept. 4, British Med. Jour.) recommended by Taylor. A number of the charts of badly infected gas cases graphically illustrated the almost immediate, remarkable change on the use of this solution of hypertonic quinine. My attention was called at the Pasteur Institute to the fact that quinine is anti-chemotactic. The clinical results obtained in spite of this apparent, well established fact are most interesting, but indicate further study. Many of the wounds undoubtedly contain the B. Tetanus. One case of tetanus was in the hospital at the time. On investigation it was found that this patient had not had the prophylactic injection of tetanus antitoxin. When the prophylactic injection of tetanus antitoxin is used tetanus rarely, if ever, occurs, in spite of the fact that only one dose of the antitoxin is usually administered. In view of the undoubted presence of the B. Tetanus in many of the wounds, it is very probable that during the period of passive protection by the prophylactic dose of antitoxin, an active bactericidal immunity also develops. There is a big field for research in this connection which could be worked out along the lines of study of diphtheria immunity.

Sodium nitrate has been found very efficient by Harde, who noted a rapid absorption of gas after its use.

Cane sugar as a dusting powder was being used in one of the French hospitals, apparently with good results.

The sodium hyperchlorite solution of Carrel is said to give good results.

Hydrogen peroxide at the time of dressing for thorough cleansing of the wound seems to be a general favorite.

I did not see potassium permanganate used, and was told the injection of oxygen, which was a very favorite remedy early in the war, has been pretty much given up.

Some of the surgeons remarked that they liked the appearance of pyocyanus in their wounds, and seemed to think it has an antagonistic influence on the gas organisms. This is very doubtful.

Before leaving the subject of treatment, I must at least refer to the magnificent plastic surgery which is being done. There is ample material for every conceivable form of plastic repair surgery. The work that stands out prominently is the plastic and repair surgery on the jaws; almost impossible results have been obtained. The American dentists are praised in this connection on all sides.

Bacteriological Studies.

A mass of fine work has been done on the bacteriology of the wounds. On account of the stress of work it has been difficult for most workers to make intensive detailed bacteriological studies. All complain of the scanty and confusing literature on the anaerobes, and the great difficulty of their accurate bacteriological classification. Miss Robertson, in the Lister Institute, has done a great deal to clear up this important subject. Her work, to which I shall refer in a later communication, will soon be published and will certainly be a big help.

In a study of wounds two large groups of organisms have been found—the anaerobes and aerobes. Of the anaerobes there is a very large group. The principal ones are: *B. refringens*, *B. Tetani*, *Vibrio Septic*, *B. of malignant oedema*. Of these the most important ones are the *B. refringens* and *B. Tetani*. The general use of the immediate prophylactic injection of tetani antitoxin (later also used for horses) has to a very great extent eliminated the latter complication.

The *B. Refringens*, as previously mentioned, may be isolated in fully 90 per cent. of all wounds, clean or infected. This organism is usually very virulent. A culture inoculated intravenously in a rabbit often kills within two minutes. Non-virulent strains also are known. The organism, a strict anaerobe, is a prolific gas former, as evidenced by the clinical instance cited; also by the experiment of incubating rabbits killed by intravenous inoculation. Within two hours the most extensive gas formation throughout the system, with profound destruction of the viscera, occurs. The organism can be isolated from the heart blood of clinical cases shortly after death. Probably there is a frequent general bacteremia of this organism. Harde, in the Pasteur Institute, proved that it produced a soluble toxin, though in small quantities. It is probable, however, that the general symptoms in the severe cases are principally due to absorption from the necrotic muscle. This, plus the local and general bacterial infection, probably explains several toxic symptoms.

Experimental intramuscular injection of the *B. Refringens* culture in the guinea-pig, gives a very good reproduction of the clinical condition seen in the human; the profuse gas formation separating the muscle fibres and distending the muscle sheath; the necrosis and degeneration of the muscles the presence of the organisms in the muscle fibres

Clinically, likewise, the bacteria are most easily cultivated from the infected muscle, while the serum exuding from the subcutaneous crepitating areas frequently fails to show the bacteria.

Culturally the organism is easy to grow but often is extremely difficult to separate from the other anaerobe with which it grows in close symbeosis. For routine quick diagnosis the presence of a fetid gas, forming luxuriantly growing anaerob. Gram positive, capsulated spore bearing, growing especially well in media containing meat which later it turns a bright red as in the clinical cases; the typical pathogenic test in rabbits and guinea pigs (marked local oedema and general gas formation in the blood and organs on killing and incubating often intravenous inoculation) usually render bacteriological diagnosis easy. Most workers use deep agar cultures simple with meat, water-meat media, gelatin meat media (Harde), egg media without other available precautions. Others (Pasteur and Lister Institutes) use strict anaerobiasis. The meat media are favored and are said to be best for preserving the cultures.

It is impossible to produce immune bodies in animals quite readily by repeated inoculation with killed culture (agglutins in the rabbits are readily formed). Protective animal vaccination experiments, however, have failed. This has been the experience of the workers in both England and France whom I interviewed. Miss Robertson in her work noted a small percentage of pigs injected with three doses of heat attenuated live culture, lived. Likewise a small percentage of pigs recovered after injection with sublethal live culture, but these recovered animals uniformly died on injection with lethal doses of culture. Likewise the serum of those sick with the disease failed to protect. Further observation, however, should certainly be made with the serum of those who have fully recovered, and with the serum of animals highly immunized.

The experiences noted speak against the efficacy of prophylactic vaccination in the human being—yet animal experiments are not always analogous to the conditions seen in human beings. Further experimentation and observation is certainly worth while.

It would be most interesting to note the effect of a highly immune serum used as a wet dressing locally for gas infected wounds, at the same time the serum being injected in massive doses subcutaneously and intervaneously.

Another frequent cause of death is streptococcus general sepsis, and judging from several blood culture plates I saw, the bacteremia must be pretty severe. These cases, like the gas infections, offer a splendid field for study, especially in the use of massive doses of anti-streptococcus serum, used locally as wet dressing to the wounds, and by subcutaneous and intravenous injection.

From a physician's standpoint the war zone offers the most wonderful opportunity for work, study and research. There is work for the surgeon of every conceivable variety; work for the internist and specialist, and more than enough work for the laboratory workers. They need the men there, too. All physicians in the warring countries are helping nobly. I was told there was a great scarcity of physicians in the large cities but I am sure they can use all they can get.



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Articles sent this Journal for publication and all those read at the annual meetings of the State Association are the sole property of this Journal. The Journal relies on each individual contributor's strict adherence to this well-known rule of medical journalism. In the event an article sent this Journal for publication is published before appearance in the Journal, the manuscript will be returned to the writer.

Failure to receive the Journal should call for immediate notification of the editor, 507 Barnes Building, Muskogee, Okla.

Local news of possible interest to the medical profession, notes on removals, changes in address, deaths and weddings will be gratefully received.

Advertising of articles, drugs or compounds not approved by the Council on Pharmacy of the A. M. A. will not be accepted.

Advertising rates will be supplied on application. It is suggested that wherever possible members of the State Association should patronize our advertisers in preference to others as a matter of fair reciprocity.

EDITORIAL

RESULT OF REFERENDUM ON PERMANENT MEETING PLACE

The vote on the referendum as to permanent meeting place, home, etc., which was submitted in December to the membership, resulted as shown by the count at the end of the year to be as follows: For the proposition, 65; against the proposition, 455. A considerable number of votes coming in after the first of the year were not included in the count, but the ratio is maintained about as above. A few votes were returned in blank either through a desire not to vote or forgetfulness to do so.

It is perhaps proper to here state that in making up the vote the blanks were submitted with the propositions alternating for and against the proposition and the arguments with each vote was submitted in like manner. For the information of the membership we will also say that the arguments were written by two men not in any way connected with the present officers and who were requested to write on account of their divergent views of the matter. Obviously there was no occasion to have the argument signed, as there was nothing to be gained by that.

SECONDARY SURGICAL WORK.

"Partial Obstruction from Gall-Stone in the Common Duct (Previously Operated)," is the subject of a clinic in a recent clinical work and opens up quite a vista of reminiscences when we recall some of our own "returns for another operation." We believe Howard A. Kelly wrote on that subject long ago. He thought that a patient going to the surgeon had a right to expect ordinarily permanent relief, yet despite everything they did come back suffering and uncured. Van Buren Knott has been a pacemaker, and his work may be said to be epochal, in that he insisted, preached and practiced the entire removal of pathology at the operation following rupture of the appendix. Good surgeons handle every case as a law unto itself and vary the technic to fit the case, rather than cling to some

rule which may be good in 80 per cent. of the cases, but is not good for the one on the table.

Getting at concrete cases, the surgeon about to operate for malignancy should be prepared to go to the uttermost, yet we know we have physicians who blindly rush in and operate such cases incompletely, only hurrying the end. We have others who operate for gall stones in patients formerly jaundiced who are too lax in exploration of the common duct, etc. The removal of too little or none of the appendix, the leaving of pockets unemptied about the site, certainly bring back an unnecessary number for the secondary operation if, as sometimes occurs, a general pyemia does not result. There is justification for the hurried drainage operation in a certain number of cases. Often it is the only sensible course to follow, but on the other hand a physician with cold pedalic extremities occasionally dooms his patient to the second call on the operating room.

OUR MOST DESTRUCTIVE DISEASES.

According to a preliminary announcement from the Bureau of the Census on the production of mortality for 1914, from figures compiled from statistics in the registration area, about one-third of the United States, analytical of 898,059 deaths, more than 30 per cent, were due to three causes—heart disease, tuberculosis and pneumonia; 60 per cent. more were accounted for by eleven causes—the above three, and Bright's disease, nephritis, cancer, diarrhea and enteritis. Food for thought is found in the information that whooping cough, measles and scarlet fever produced 15,617 deaths; railway and street car accidents, 7,062, and death by suicide in various manner accounted for 10,933.

The first three of the great group are often a culmination of minor causes and infections which, to a certain extent, might be prevented by early and systematic attention to detail by the family physician. This especially is true of heart disease, which is so often sequelae to the so-called milder infections such as throat infections and the arthritides. The control of tuberculosis is certainly a matter of early and intelligent application of hygiene and treatment, while pneumonia will always rank very high probably as a mortality producer.

Of the 52,407 deaths from diarrhea and enteritis, a rate of 79.4 per one hundred thousand, it is interesting and also encouraging to note that the rate in 1900 was 133.2; in 1913, 90.2; all indicating that physicians are surely adopting more effective means of control, while of course it should not be overlooked that mothers are more educated to the dangers today than ever before. With all this, however, more than five-sixths were in infants under 2 years of age.

A triumphant note is sounded in the statement that the death rate from typhoid, which in 1900 was 35.9, has dropped to 15.4. A similar great fall is shown as to diphtheria.

PERSONAL AND GENERAL NEWS

Dr. M. Levi, for several years resident of Elk City, has moved to Beaver.

Dr. Harry Haas, Sapulpa, has returned from post graduate work in Chicago.

Dr. M. E. DeGroat of Alva, is seriously ill and his recovery is a matter of conjecture.

Dr. Roy Vandeventer, Helena, was recently operated upon for appendicitis in Kansas City.

Dr. J. L. Holland, Madill, recently sustained an "automobile" fracture while cranking his machine.

Drs. L. Haynes Buxton and H. C. Todd, Oklahoma City, announce the dissolution of their partnership.

Dr. Sessler Hoss, Muskogee, and Miss Irene Morrow of Nashville, Tenn., were married in Nashville December 24th.

Dr. Burton Fain, formerly of Weatherford, Tex., has moved to Frederick and formed partnership with Dr. H. L. Roberts.

Dr. G. P. Cherry, Manguon, received painful injuries and narrowly escaped death when he was struck by an automobile recently.

Drs. E. Brent Mitchell and General Pinnell, Lawton, announce the formation of a partnership. Work will be limited to eye, ear, nose and throat.

Bartlesville physicians treated themselves to a banquet on the occasion of the eighth annual meeting of Washington county society. About twenty-five physicians attended.

Dr. Jas. C. Johnston, McAlester, recently had the misfortune to lose his wife. Death occurred instantly. His many friends regret his misfortune and extend to him every sympathy.

The Tahlequah Telegram complains that it is impossible to publish statistics on public health matters in Cherokee county; that the health officer cannot supply the figures as the physicians fail to report.

Dr. C. S. Lynch, Hugo, whose property had been tied up temporarily by an injunction, secured a release from that order recently in the District Court of Choctaw County. The trial as to damages will be taken up later.

Dr. and Mrs. C. M. Tracy, Woodward, opened the New Woodward Hospital with a six o'clock dinner January 13. The guests, physicians and their wives were representative of practically all the profession of Woodward county.

Dr. Ed. A. Mayberry, Enid, died in Hot Springs, Ark., December 26th. Dr. Mayberry had been ill for some time with stomach trouble and it was hoped the waters of the springs would benefit him, but they were without avail.

Dr. LeRoy Long, dean of the Medical Department of the State University, delivered an address on December 27 to the Candler Club, St. Luke's Church, Oklahoma City, his subject being "The Mutual Interests of the Layman and the Doctor."

Dr. Charles Sanders of Washington, D. C., but formerly of Muskogee, it is said is contemplating location in Oklahoma. Dr. Sanders was one of the first physicians to go to Europe with the American Red Cross and served six months in Germany.

Dr. Walter L. Capshaw, Norman, died at his home in that place Christmas morning. Dr. Capshaw had been ill for some time and his death did not come as a surprise. Dr. Capshaw had been professor of anatomy in the University for seven years. He leaves a wife and two children.

Dr. J. J. Williams of Weatherford has been appointed to the vacancy on the State Board of Medical Examiners created by resignation of Dr. LeRoy Long. Dr. Williams brings to the Board several years of intimate acquaintance with Oklahoma laws and usages, as he was Senator from his district during several legislatures.

Dr. John D. Quackenboss, New York, is authority for the statement that "the girl of today is wholly unfit to be a wife and mother; that the drink habit is growing among society women; that debutantes drink wine and smoke cigarettes in the corridors of hotels, and that girls of good families, with painted faces, mix openly in roof garden and cabaret with up-to-date bacchantes."

Dr. John B. Murphy, Chicago, publicly states that Oklahoma City surgeons demonstrated their high ability at the recent meeting of the Medical Association of the Southwest. That the clinics were practically conducted with credit to metropolitan centers and "the instructions in the medical school were, from a practical standpoint, high-class and on a par with the more eastern schools except that the students were given less predigested education."

Madison County (Ill.) papers think they have taken effective steps to forever curb criticisms of their ethics in accepting promiscuous patent medicine advertisements. Recently all but two of the papers in that highly civilized center, represented in meeting of the county press association, decided to hereafter refer to physicians as "Mr." and not "Dr." It is said that this move followed that of Alton papers which, exasperated at criticisms on their acceptance of questionable newspaper advertising, took the step as a retaliation.

Neosalvarsan will be manufactured in Philadelphia by the dermatological laboratories of the Philadelphia Polyclinic. Dr. Jay F. Schamberg, Director, after a conference with representatives of Farbwerke-Hoechst Company, makes the announcement of manufacture. It was the opinion of the conference that no injunction would issue against the manufacture and distribution of a drug that was saving life and conserving public health at a time when the patentees could not supply it. The prices will be those prevailing before the war, and profits, if any, will be devoted to the fund for further scientific research, which Dr. Schamberg announces has been going on under a bequest for some time past.

American physicians are not allowing the European war to progress without leaving their imprint on its phases. Dr. D. M. Dold, a physician of New York, who was in Nish at the surrender, acted as intermediary between the Bulgarians and Serbians, asking for protection for the hospital and its stores and equipment. The request was granted, Sir Ralph Paget placing in his charge the stores of relief supplies. The Journal A. M. A. announces the marriage of Dr. Philip Newton,

Washington, and Princess Shahofskaya of Petrograd. The United States has supplied scores of surgeons who have been assigned to various hospitals for a time and it is stated that probably two thousand five hundred more surgeons will be required to fill the demand in a short time, so far as the English forces are concerned. The greatest praise is accorded the American Red Cross units for their work in cleaning up Serbia after the outbreak of typhus.

Blackwell's School Survey, conducted by Superintendent A. J. Lovett, demonstrates that pupils are repeating their grade work by reason of physical defects that could be remedied. Of 671 pupils in the grades, 133 have repeated one year's work; 63 two years' work; 24 three years' work, and 6 four years' work; while 72 are repeating now. It is estimated that this repeating is costing the city of Blackwell \$2,000.00 a year in extra salaries. The conclusion is that medical inspection in Oklahoma's schools and the removal of easily correctable defects would save the state a great amount of money. (To all this we agree, but when are we going to do it? Who is going to control the fatuous Christian Scientists, and the similar isms who directly and indirectly object to everything that may cause people to think about themselves? Is it not evident that a parent who objects to his child studying physiology will object to the child knowing or having to admit that there is anything wrong, except imaginarily, about its throat or tonsils?—Ed.)

COUNTY SOCIETIES.

Rogers County Society met December 27, with the following program: Election of officers resulted in J. G. Waldrop, Claremore, president; F. A. Anderson, vice-president, Claremore; W. A. Howard, Chelsea, secretary-treasurer, re-elected. Program of the meeting: "First Aid in Eye Traumatism," W. A. Cook, Tulsa; "Surgery vs. The General Practitioner," Ralph V. Smith, Tulsa; "History and Uses of the X-Ray," J. W. Craig, Vinita; "Internal Medicine," Walter E. Wright, Tulsa; "E Pluribus Unum," W. F. Hays, Claremore; "Pneumonia," J. C. Bushyhead, Claremore.

Members of the State Association generally will be interested in the statement of principles noted below. They are worthy of deep consideration.

Slogan for Rogers County Medical Society, 1916:

"United We Stand as a Fraternity"

Every Physician, no matter how great his eminence, owes more to his profession than the profession owes to him.

Holding every man a debtor to his profession, he is only discharging part of this debt by doing active work in his County Medical Society, exchanging, giving and receiving of the general store of knowledge gained in investigation, observation and experience, and thus aiding in the general advance of the profession and rendering less evident the lack of training and general information prevailing within our ranks.

If the educational value of the Medical Society could only be realized by those mostly in need of it, the attendance would include the entire roll of eligible physicians of every county. Apathy, indifference and intellectual laziness are always foes of Medical progress.

Bristow Medical Society of Bristow, Creek county, has been organized with Dr. V. M. Reynolds, president; J. J. Nabhan, secretary, and John W. Wells, treasurer.

McIntosh County Society elected J. C. Watkins, Cherotah, president; J. N. Shaunty, Eufaula, vice-president; W. A. Tolleson, secretary-treasurer, re-elected; D. E. Little, member board of censors; W. A. Tolleson, delegate; A. B. McLaughry, Checotah, alternate.

McCurtain County elected: A. S. Graydon, Idabel, president; A. W. Clarkson, Valliant, vice-president; C. R. McDonald, Broken Bow, secretary-treasurer; R. D. Williams, Idabel, delegate.

Tulsa County elected: President, W. H. Rogers; vice-president, H. C. Childs; secretary-treasurer, J. W. Rogers; delegate, N. W. Mayginn; censor, H. D. Murdock, all of Tulsa.

Pontotoc County elected: President, L. M. Overton, Fitzhugh; vice-president, Fred Harrison, Stonewall; secretary-treasurer, J. L. Jeffress, Roff; delegate, W. D. Faust, Ada; censors, C. L. Orr, Roff; J. M. Vaden and S. P. Ross, Ada.

Ottawa County elected: President, A. M. Cooter; vice-president, J. C. Jacobs; secretary-treasurer, G. P. McNaughton, Miami; censors, F. L. Wormington, Miami; R. H. Harper, Afton; M. P. Willis, Commerce; delegate, R. F. Von Cannon; alternate, G. P. McNaughton, Miami.

Pottawatomie County elected: President, M. A. Baker; vice-president, E. E. Rice; secretary-treasurer, G. S. Baxter, Shawnee; second vice-president, A. K. Allis, Wanette; censors, J. A. Walker, J. H. Scott; corresponding secretary, J. M. Byrum, Shawnee.

Central Oklahoma Medical Association met in Enid January 11. L. W. Cotton, Enid, was elected president; L. Haynes Buxton, Oklahoma City, 1st vice-president; H. Vandiver, Lahoma, 2nd vice-president; Leigh F. Watson, Oklahoma City, secretary-treasurer; censor, T. M. Aderhold, El Reno. The interesting features of the meetings were the clinics presented. The meeting was followed by luncheon at Oxford Hotel.

Washita County elected officers for 1916 as follows: President, E. T. Sandberg, Cordell; vice-president, J. M. McQuaid; secretary-treasurer, W. R. Leverton, Cloud Chief; censors, A. M. Sherburne, Cordell; G. A. Dillon, Dill; delegate, A. H. Bungardt; alternate, J. W. Kerley, Cordell.

LeFlore County Society elected officers as follows: President, W. M. Stuart, Heavener; secretary-treasurer, W. M. Duff, Braden.

Cotton County: President, Howard McKinney, Temple; vice-president, M. J. Sanders, Devol; secretary-treasurer, M. T. Clark, Temple.

Canadian County elected: President, Jas. T. Riley; vice-president, J. A. Hatchett; secretary-treasurer, W. J. Muzzy, El Reno; delegate, F. H. Clark; alternate, S. S. Sanger, Yukon; censors, Jas. T. Riley, T. M. Aderhold, C. W. Taylor, El Reno.

Caddo County elected: President, Geo. McVey, Cyril; vice-president, C. E. Putnam, Eakley; secretary-treasurer, Chas. R. Hume, reelected; delegates, M. H. Edens, Verden, and P. H. Anderson, Anadarko.

Custer County elected: President, M. C. Comer, Arapahoe; vice-president, L. L. Patterson, Arapahoe; secretary-treasurer, S. C. Davis, Weatherford.

Garvin County elected: President, Ernest Sullivan, Maysville; vice-president, F. C. Branum, Pauls Valley; secretary-treasurer, N. H. Lindsay; delegates, J. W. Shelton, Pauls Valley, and W. C. High, Maysville.

Adair County elected: President, A. J. Sands, Watts; vice-president, J. A. Patton, Stilwell; secretary-treasurer, S. R. Evans, Stilwell; censors, C. A. Walters, Stilwell, D. A. Beard, J. A. Lane, Westville. Program of the meeting: "Pneumonia," T. S. Williams, Stilwell; "The Good of the Society," A. J. Sands, Watts.

Garfield County elected: President, S. A. Looper, Garber; vice-president, A. M. McMahan, Hillsdale; secretary-treasurer, C. E. Thompson, Enid; delegate not selected.

Tillman County elected: President, T. F. Spurgeon, Frederick; vice-president, O. G. Bacon, Davidson; secretary-treasurer, L. A. Mitchell, Frederick; delegate, W. A. Fuqua, Loveland; censor, A. B. Fair, Frederick.

Okmulgee County elected: J. E. Bercaw, Okmulgee, president; Harry Breese, Henryetta, secretary-treasurer; delegate, V. Berry; alternate, R. L. Westover, Okmulgee.

Okfuskee County elected: President, B. Watts, Okemah; vice-president, J. S. Rollins, Paden; secretary-treasurer, John L. Sims, Weleetka.

Pottawatomie County Society. 10th Annual Meeting, Shawnee, January 11. Program: Clinic—Simple Goitre, Dr. R. M. Anderson; Clinic—Exophthalmic Goitre, Dr. F. L. Carson; Clinic—Pellagra, Dr. T. C. Sanders; Clinic—Gastric Ulcer, Dr. J. M. Byrum; Clinic—Pulmonary Tuberculosis, Dr. J. H. Scott; Clinic—Dr. H. H. Wilson.

Evening Session: Call to Order by President, Dr. Bradford. Election of Officers; President's Address, Dr. W. C. Bradford; Clinic—Pityriasis Rosea, Dr. J. A. Walker; Clinic—Osteomyelitis, Dr. J. E. Hughes; Clinic—Tubal Pregnancy, Dr. E. E. Rice; Clinic—Presenile Gangrene, Dr. G. S. Baxter; Clinic—Lympho-Adentitis, Dr. T. D. Rowland; Clinic—Dr. W. M. Gallaher; smoker.

CORRESPONDENCE AND MISCELLANEOUS

Vinita, Okla., Dec. 27, 1915.

Dr. C. A. Thompson, Muskogee, Okla.

Dear Doctor: Permit me to especially call your attention to the article of Dr. T. F. Duhigg, of Des Moines, Ia., in the current issue of the Journal of the A. M. A. on "Where Chiropractors are Made," Des Moines being my original home, and personally knowing the author, I was particularly interested in his resume of the subject.

I believe that there are few, particularly among the surgeons of the state, who have not encountered the horrible effects of "too much chiropractor" as associated with pus cases in the abdomen. I have a number of records of cases in this immediate section, appendix and tubal, which beyond question have been ruptured and brought to a fatal termination by means of abdominal massage at the hands of a chiropractor.

It does seem that something more tangible could be done to eradicate this evil than the passing of condemnatory resolutions at county society meetings, which seems to be about as far as the matter ever gets with us. The general attitude among professional men is that it would be a fine thing if we were rid of them, but "let George do it."

The solution of the problem is obviously through legislation similar to that now in force in Iowa, and that will only be attained through concerted action and not by individuals. How may we arouse the activity of the profession against this growing evil?

Very truly yours.

W. W. JACKSON.

NO MORE HOLDUPS FOR NEOSALVARSAN

Muskogee, Okla., January, 20, 1916.

Dr. Jay Frank Schamberg, Philadelphia, Pa.

Dear Doctor: I noticed in a recent issue of the Journal A. M. A. that you were about to make arrangements for the manufacture of salvarsan and neosalvarsan.

This is a matter of great interest to we physicians in Oklahoma, who have had increased difficulty in procuring this drug and finally were unable to get any. For the information of the profession generally, I will thank you to advise me if the report is correct and how soon the product will be on the market. If it is already on, or soon will be, will you kindly have me sent prices?

Thanking you in advance, I am,

Yours very truly,

C. A. THOMPSON, Secretary.

DEPARTMENT OF DERMATOLOGICAL RESEARCH

PHILADELPHIA POLYCLINIC AND COLLEGE

FOR GRADUATES IN MEDICINE

Jay Frank Schamberg, M. D., Director

Philadelphia, January 24th, 1916.

Dr. C. A. Thompson, Muskogee, Oklahoma.

Dear Doctor: In reply to your letter of January 20th, I would say that we are distributing our arsenobenzol, which is substantially the same substance as salvarsan, in ampoules of 400 mg. at \$2.50 per tube, and 600 mg. at \$3.00 per tube. The drug is tested out biologically for toxicity and therapeutic effect before being sent out. Over 1000 injections of this drug have been given with excellent therapeutic effect and with no untoward results. A circular of instructions accompanies each tube. Checks should be made out to the order of the Dermatological Research Laboratories.

Very truly yours,

JAY F. SCHAMBERG.

Note: Any profits that may accrue from the sale of this preparation will be exclusively devoted to the establishment of a fund for further scientific research and no part thereof shall inure to the benefit of any individual.

Note 2: Inasmuch as certain persons and "Fly-by-Night" druggists, even some physicians with tendencies more commercial than ethical or humanitarian have sought to hold up legitimate use of neosalvarsan by demanding outrageous prices for a dose of the drug, the above information will be doubly welcome. The sponsors named above are above reproach professionally and from the standpoint of ability, second to none, and prospective users may be assured of purity, not alone of the product offered, but the motive actuating the offer as well, (Editor.)

FROM THE OKLAHOMA STATE BOARD OF HEALTH, GUTHRIE, OKLAHOMA.
DR. JOHN W. DUKE, COMMISSIONER.

CUTTING OUT TOBACCO.

About January 1 there was throwing aside of pipes and widespread abandonment of cigars and cigarettes, not only in Oklahoma, but throughout the United States, by smokers who had resolved to turn over a new leaf. Few men who become inveterate smokers permanently abandon the use of tobacco, though in many instances their health would be vastly improved by doing it. Aside from such injury to nerves and digestion as may be caused by too much smoking, many smokers suffer a depression of physical and mental energy, and find themselves compelled to fight daily against a certain stupor due to smoking, which deprives them of business and other initiative during part of the day. That's why those who stop for a month or two agree in saying that they "feel like a new man." As a rule smokers are fondest of the butt of their cigar or cigarette, which contains the greatest available amount of toxicity. The editor of the New York Medical Record recommends the use of a long-stemmed pipe by those who suffer from smoking, if they are unwilling to abandon the habit, and says that in case of cigars and cigarettes they should be discarded when about three-quarters smoked as this will greatly reduce the amount of possible poison that enters the system through smoking.

THE TUSSLE WITH INFLUENZA.

Oklahoma has had practical experience with influenza or gripe during the last five or six weeks that has resulted in much sickness and many deaths. Such an experience should make it impossible for anybody to forget that the discharges due to sneezing and coughing should be caught in a handkerchief or cloth and burned. The influenza germ attacks without warning, and the best way to prevent the spread of this disease is to control the agencies by which it travels. Sneezing in another's face by an influenza sufferer rarely fails to convey the disease. Street cars and public gatherings give the in-

fluenza germ its best opportunity. Fresh air in large volume is fatal to disease germs, and highly beneficial to human beings. Accordingly, all living rooms should be well ventilated at all times, even in coldest weather. Raise all the windows frequently and let in the fresh, cold air, but don't sit in the draft. This is the best kind of medicine, and excellent habit, and will save doctor's bills.

WALLOP THE WINTER HOUSE FLY.

Don't make a pet of the winter housefly. His drowsy buzz may be reminiscent of the pleasant days of spring, but this is only a sign that the fly still has enough energy to outlive frost, if allowed the shelter of the chimney corner and the cracks in the kitchen. In exchange for this hospitality, the winter fly will go forth and hatch millions of eggs in early spring, and by the time warm weather has arrived his progeny will be ready to scatter sickness and disease throughout the land, conveying the most loathsome filth from outdoors to kitchen and pantry and to individuals themselves. The winter fly is a sworn and faithful ally of typhoid and the undertaker. Kill every winter fly in sight, and then hunt for and kill every one that may be found in hidden places. Burn their bodies, and take no chances on their "playing 'possum."

POISONOUS FLY PAPER

A year ago, in discussing this subject editorially, we gave a partial report of the cases of arsenical poisoning of children from accidentally consuming the contents of fly destroying contrivances during the summer of 1914. It was gratifying to note the number of medical journals that reprinted our editorial or commented upon the subject. The discussion was evidently a timely one.

For the summer of 1915 we have been able to secure the reports of the following cases:

Month	No.	Fatal	Recovery Indicated	Recovery Doubtful
May	1	1		
June	2			1
July	5	2	2	1
August	14	5	8	1
Totals	22	8	10	4

These cases were reported by the daily press as occurring in the following states: Georgia, 1; Illinois, 6; Indiana, 2; Iowa, 2; Massachusetts, 2; Michigan, 2; Missouri, 1; Nebraska, 1; New York, 1; Oklahoma, 1; Ohio, 1; Pennsylvania, 2; a total of twenty-two cases. This report must necessarily be considered as very incomplete and but an indication of the possible extent of a wholly preventable danger.

We again point out the fact that the symptoms of arsenical poisoning are very similar to those of cholera infantum and that undoubtedly a number of the cases of cholera infantum that occurred were really cases of arsenical poisoning, and death if occurring, was attributed to the fact. The cases reported were of children ranging in age from 1 to 6 years. These little patients are not old enough to tell what they have taken when questioned as to their illness and unless they are seen consuming the fly poison the actual cause of their sickness or death is overlooked and the fatality ascribed to cholera infantum or to some other similar causes and the error in diagnosis goes undetected.

We repeat, arsenical fly destroying devices are dangerous and should be abolished. Health officials should become aroused to prevent further loss of life from their source.

Our Michigan Legislature, this last session, passed a law regulating the sale of poisonous fly papers. Similar enactments should be secured and enforced in every state in the Union.

—Journal of the Michigan State Medical Society.

PREPAREDNESS.

National preparedness against war may seem to be a questionable subject for discussion by one engaged in public health work, but it has its sanitary side.

The damage done by an invading army is not limited to the lives and property destroyed during battle, or to the interruption to business and education, or to the derangement of the training of young men and women for their life work, or to the atrocities heaped upon non-combatant men, women and children in the war zone.

Mars and Hygieia have been sworn enemies since the world began. Pestilence and famine are the twin children of war.

Military necessity, like charity, covers a multitude of sins, and no political, religious, business or family relation has any right that war is bound to respect.

The question, "From what direction is our national safety threatened?" is on a par with Cleveland's attitude towards smallpox in 1902. Failure to enforce the compulsory vaccination laws cost the lives of 224 of her citizens, temporary closure of her schools, and millions of dollars of loss in trade. Immunity could have been purchased for a few thousands of dollars. The nation "too proud to fight" is like the individual who is not afraid to drink a polluted water supply, and pays for his indiscretion with his life.

National preparedness against war is the greatest single sanitary precaution that could be taken for the safety of the public health of the entire nation. Every battleship built, every pound of powder manufactured, every cartridge, torpedo and rifle completed; every man trained for "the day," is an additional sanitary safeguard taken to exclude from our shores the disease now rampant on the continent of Europe.

Fords and Carnegies, in their ideas concerning preparedness against war, are like those who do not believe in vaccination until after smallpox has gained a firm hold on a community, or like those others who only begin to see the protecting value of filtered water after typhoid has become epidemic. Ford became the master auto builder because of preparedness to meet and check his competitors in the same line of trade. Carnegie became master of the iron industry because his organization and methods brought him to a state of preparedness superior to that of competing firms.

Business principles are as applicable to nations as to individuals. The same line of reasoning now being followed by Ford and Carnegie concerning national preparedness against war, if applied in conducting their own private enterprises, would have left their plants heaps of junk and piles of scrap.

Cholera, typhus fever, small pox, typhoid fever and camp dysentery are claiming their thousands in the European war zone.

One widespread epidemic of cholera in this country would entail an economic loss greater than the cost of all the warships that plow the seas.

Preparedness against war is an insurance against invasion, wholesale slaughter of non-combatant citizens, and unspeakable crimes against helpless women. It is also a wall of iron and steel through which the diseases now prevalent in the countries at war, could not pass.—Lancet-Clinic.

NEW BOOKS

In this department publications sent THE JOURNAL will be acknowledged as they are received. Reviews of new publications will be made only as space and time permit. Publishers are requested to bear this in mind in forwarding books, etc., for review.

DIFFERENTIAL DIAGNOSIS

Volume II.

DIFFERENTIAL DIAGNOSIS. Presented through an Analysis of 317 cases. By Richard C. Cabot, M.D., Assistant Professor of Clinical Medicine, Harvard Medical School. Octavo of 709 pages 254 illustrations. Philadelphia and London: W. B. Saunders Company, 1914. Cloth, \$5.50; Half Morocco, \$7.00.

Cabot's Differential Diagnosis is an elaboration of the well-known and famous system of case-system so popular at Harvard Law School, and since introduced into the Medical School. This second volume is a continuation of Vol. I. The book is very readable, and contains a veritable mine of interesting cases. The differential diagnosis of each case is logically handled. It is a book worthy of a place in the library of the up-to-date physician.—F. J. W.

THE PRACTICAL MEDICINE SERIES

Volume 9, "Skin and Venereal Diseases," edited by Oliver S. Ormsby, Professor and Head of the Department of Skin and Venereal Diseases, Rush Medical College, with the collaboration of James Herbert Mitchell, Research Fellow in Pathology, Rush Medical College, and "Miscellaneous Topics," edited by Harold N. Moyer, Chicago. Cloth, 240 pages, illustrated, Price \$1.35.

Volume 10, "Nervous and Mental Diseases," edited by Hugh T. Patrick, Professor of Neurology in the Chicago Polyclinic, etc., and Peter Bassoe, Assistant Professor of Nervous and Mental Diseases, Rush Medical College. Cloth, 240 pages, illustrated. Price \$1.25. Chicago, 1915. The Year Book Publishers, 327 South LaSalle St.

THE MEDICAL CLINICS OF CHICAGO

Volume I, Number III (November, 1915)

THE MEDICAL CLINICS OF CHICAGO. Volume I, Number III (November 1915). Octavo of 200 pages, 23 illustrations. Philadelphia and London: W. B. Saunders Company, 1915. Price per year: Paper, \$8.00; cloth \$12.00.

The notable features of this issue are: "Typhoid Fever, With Full Discussion Regarding Treatment," clinic of Charles Spencer Williamson; "Partial Obstruction From a Gall-Stone in the Common Duct" (Previously Operated), Frederick Tice; "Neuritis," Ralph C. Hamill; "Eneuresis," Isaac A. Abt; "Acute Catarrhal Jaundice," Robert Preble; two articles or reports on brain tumor by Chas. A. L. Mix and Richard J. Tynen; but the classic of the book is "Abdominal Pain" from the clinic of Walter W. Hamburger. This subject is of daily and positive interest to every physician and more mistakes are made and tragedies enacted over its misinterpretation than of any other one symptom. The book follows the effective style heretofore noted in previous reviews and is full of good things space does not permit of mention.

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THE NEGLECTED PROSTATE

BY A. L. BLESCH, M. D., F. A. C. S.

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Associate Professor of Surgery, Oklahoma University, School of Medicine.

The time has long gone by when the prostatic is to be passed by as the pitiful victim of an incurable disease. At least every physician should possess the knowledge that his condition is amenable to an astonishingly safe surgical procedure. Yet, within the knowledge of almost every physician, there are just such sufferers, many of whom are put off with a prescription of urotropin or dilly-dallied with bladder irrigations.

It is not the intention of the writer in this paper to enter extensively into the technic of the operation of prostatectomy. Surgical technic is to be acquired in quite another way than by written words, but rather to make a plea for these otherwise doomed sufferers, that they, too, be given their chance. Surgery comes to them now with a clean-cut proposition which can be stated in terms somewhat like this: You have a disease, obstructive in type, that is sure to be progressive, the ultimate end of which is death. There is no known means of cure outside of a surgical operation. If this obstruction to the urinary outflow is not removed, the natural course is, no matter how frequently you urinate, and it will be more and more frequent until you cannot urinate at all, your bladder is never empty. You always have a "residual" urine in the bladder which undergoes ammoniacal decomposition, irritates the bladder, becomes the breeding ground for various bacterial flora, and occasions cystitis which ultimately leads to an ascending renal involvement, and another death from "Bright's" is reported.

If you are so fortunate as to escape infection during this time of stress when you are arising fifteen or twenty times a night to urinate, that final untoward event is sure to come with the advent of the catheter. Unless the gods of some kindlier euthanasia come to your rescue, you are sure to come to the catheter sooner or later, and he who enters the catheter realm leaves hope behind.

Surgery offers to you now a mortality rate well within 5 per cent. on the one hand and on the other a complete relief in 75 per cent; decided improvement to that extent that the post-operative condition is not at all comparable with the pre-operative, in the remainder.

It is now well known that 10 per cent. of all adenomatous prostates are ultimately destined to malignancy. This is in harmony with the well-known law of irritation as a predisposing factor in the development of malignancy. It runs true to form in fibroma uteri, in the lip of the smoker, in the female breast and the lacerated uterine cervix. The complications of operation have mostly to do

with the neglected cases—that is to say, with those in which the bladder has been damaged beyond recovery by infection and over-distension and with the kidney complications. Aside from these there are a few complications, now happily few, having to do directly with the operation itself, such as urinary incontinence, stricture, etc. What it may have to do with impotence is not at all clear for obvious reasons. Failure of the operative wound to close quite obviously depends upon whether stricture is permitted to form or not.

The chain of sequences following prostatic obstruction can now be fairly well stated as follows:

1. With the appearances of the obstruction comes a muscular compensatory hypertrophy of the bladder wall. During this stage, which is of variable duration according to whether the obstruction is rapid or slow of development, the patient is fairly comfortable, noticing only that he urinates rather more frequently than normal and with less force. This abnormality increases progressively with the added factor of infection and cystitis, until the appearance of

2. The second stage—that of lost compensation. Now we will find the bladder capacity increased, but the symptom which impresses the patient most is the fact that he is unable to void his urine voluntarily and is compelled to resort to the catheter. If he had been fortunate enough to escape infection heretofore, it is now certain to follow. This stage does not as a rule appear suddenly without prodromata. The patient will have had periods and occasions when he will have had to resort to the catheter to empty his bladder, especially after exposure to cold, or a drink or two of some alcoholic.

The infection of the kidneys, which is the terminal condition of most of these cases, is probably not due to a backing up of infected urine from an over-distended bladder, as was formerly believed, but is a true example of an ascending infection from continuity of mucosa.

It is true that an over-distension of the bladder will also cause a distension of the renal pelves and ureters, but this is indirectly the result of the bladder overdistension—that is, it is due to a *vis a tergo* and not a *vis a fronte*.

Because of the oblique direction the ureters take upon entering the bladder it is a physical certainty that the fuller the bladder the firmer are the ureteral openings closed. This I have demonstrated on the bladder removed from the body with a portion of each ureter. After the bladder is filled to a certain degree, its walls will rupture before the ureteral valves give way. But if the bladder is full to the extent that there can be no back ureteral leakage and the intravesical pressure equalizes that from the kidneys, there will be pelvic retention. This explains what is meant by indirect dilatation. However, there can be no doubt but that this dilatation and urinary stasis favors infection.

The mortality of prostatic obstruction, or prostatism, can only approximately be estimated. The disease occurs after mid-life and in advanced years when the average mortality is high. To say nothing about the “death in life”—the intolerable suffering of these poor, old victims who above all need their rest at night—no one will gainsay that the death-toll directly and indirectly is enormous. They enter the mortality lists under one guise and another, but the flag hoisted above the remains usually bears the legend: “Bright’s disease” and cancer.

In a way this is quite correct, since these diseases are only too often the logical terminal condition. Cancer claims a full ten per cent. As stated above, surgery now offers a mortality well under five per cent. in spite of the fact that up to now it has not been offered a square deal. The sufferer as a rule does not come until life ceases longer to be liveable. At best their time of life makes of them undesirable risks, but if we add to this the inroads on resistance made by prolonged suffering, infection and loss of sleep, we are compelled to say that modern surgery nowhere offers such triumphs as here.

Factors Making for Safety in Operation.

1. On account of the age of many of these patients and their poor resistance, other things being equal, clean, speedy work is imperative. As a matter of fact the operator who cannot deliver a speedy operation in a technically, correct manner has no business trying to do it and can have no justification. The average prostatectomy should be done and the stitches in place within ten minutes. Here in these very patients it will be demonstrated that mortality is in direct ratio to the length of the operation.

2. In those cases with renal involvement or advanced infection a two-step operation is proving a decided life-saving factor. The first step consists in a supra-pubic drainage done under local. The time between the two-steps will in justice to the patient be of varying duration. I sent one patient with very bad renal function home for two months, with the supra-pubic drain in situ, and had the satisfaction of having him return showing a gain of twenty-five pounds in weight and a safe risk for the enucleation. This patient was on the verge of uremic coma when he first came in.

3. The choice of anesthetic is an important question. Here, if anywhere, ether has the opportunity to exercise its hurtfulness on the kidney, and may turn the scale against the patient, especially if the operation is prolonged.

Anoci-association has its advocates, but I have oftener thought that Dr. Crile has attributed the results due to his great speed and skill in shock reduction to his anoci-association idea. It is true that shock is to be feared in these patients primarily, and kidney sequestration secondarily. Shock is almost in direct ratio to the length and roughness of manipulation of the operation itself, and the renal sequestration to the dosage of the ether. This in turn depends on the duration of the operation.

Nitrous oxide and oxygen has proven very satisfactory in my hands for this work. In refractory cases the addition of a little ether facilitates matters greatly.

This not being a technical paper, we will not enter into a discussion of operative technic, routes of election, renal functional tests, etc.

Resume

1. Observation goes to show that notwithstanding the fact that surgery offers the only relief in sight for the distressing and dangerous condition known as prostatism, yet the general practitioner has not fully awakened to his responsibility to his patient in this matter.

2. That not only does surgery offer these patients their only hope, but that as compared with other operative procedures it is not in skilled hands a dangerous procedure, the mortality being under five per cent.

3. That the disease itself offers a colossal mortality and a hopeless purgatory of suffering and mortality.

4. That the operation of prostatectomy is not only a relatively safe procedure but offers a positive cure with an ever-decreasing minimum of post-operative complications.

5. That cancer can be demonstrated as already existing in ten per cent. of prostates removed. That in accordance with the well-known law of irritation in cancer formation, our only hope in this class of cases in cancer, death reduction lies in early operation.

6. That it is the experience of every experienced surgeon that, owing to direction either on the part of the family doctor or the patient himself, these cases come to him for operation later in the course of the disease than they should, and many come not at all.

7. In view of the above conclusions, which are indeed trite, is it not obvious that a campaign of education should be waged in the profession itself? We should return to the old meaning of the title: "Doctor—that is teacher."

FACIAL PARALYSIS—OPERATIVE TREATMENT.

BY DR. G. A. WALL, TULSA, OKLA.

This distressing and disfiguring condition, resulting from injury or inflammatory action which destroys the nerve in its continuity, has in times past been considered incurable. Not until 1895, when Ballance and Stewart made the first attempt to remedy the condition, by operative procedure, was the condition thought to be a surgical one. They united the distal portion of the facial into the side of the spinal accessory.

The first end-to-end anastomosis, for this condition, was done in 1898 by Faure, who cut the spinal portion of the accessorius and united it to the distal part of the divided facial nerve.

The credit of originating and publishing this work belongs largely to Ballance and Stewart, who first published their conclusions in 1901. Since then, many cases have been reported in literature. According to these observers, regeneration occurs in the distal segment of a divided nerve, even when it is separated from its central connection.

Such regeneration does not reach maturity, unless the distal is again joined to the proximal segment, transmitting impulses between the centers and the periphery. This regeneration, however, is sufficient to maintain the isolated peripheral nerve in a fairly healthy state for many years. It also preserves the end organs; for, when a healthy proximal segment is finally anastomosed with the peripheral nerve, under favorable circumstances, almost complete regeneration takes place, causing normal muscular action in the areas supplied by the peripheral nerve. It therefore, seems advisable in most cases of facial paralysis, especially in those cases where the injury is proximal to the stylomastoid foramen, to attempt anastomosis of the distal segment to a healthy motor nerve trunk, for the cure of the condition.

Experimental work done on animals, by Manasse and Barrigo-Ciarrella, 1900-1901, showed that anastomosis between the facial and spinal accessory uniformly leads to complete restoration of movement in the facial muscles in about six months, the first evidence of restoration occurring in about four and one-half months. There seems to be no limit on the time when restoration, or the process of regeneration takes place, since Murphy* reports a case of his own in which regeneration took place after the nerves had been divided twenty-six years.

It is also a fact that all divided peripheral nerves, except the nerves of special sense, will unite and function if united end to end and there is no intervention of scar tissue. Faulty results in nerve anastomosis must therefore be attributed to faulty technic in not placing the nerve ends in contact so that the axons may become continuous. This, no doubt, has been the cause of the divided opinion of the profession as to whether or not a nerve would unite and functionate, if once divided.

For a long time it was believed that nerve paralysis which had existed for a long time, resulted in complete atrophy of the muscle cells, amounting to a practical destruction. According to Murphy (Clinics, Feb., 1915) the muscle cells do atrophy somewhat, but they are not completely destroyed. As soon as the nerves begin to function, the muscle cells likewise begin to function again. Two nerves have been selected, as suitable for anastomosis with the distal end of the facial, the spinal accessory and the hypoglossal. The reasons for using the hypoglossal are as follows: Its nerve trunk is large; the proximity of the cortical centers of the facial and hypoglossal; some of the fibres of the two nerves have a common origin, and their centers are closely connected by association fibres, thus making cortical education and control easier after operation; the associated movements when present, are not visible.

*Clinics, Feb., 1915. P. 79.

Against the use of the hypoglossal are, that the difficulties of deglutition, phonation and mastication, and the paralysis of taste on the anterior half of the tongue are much more distressing than are the results of cutting the spinal accessory.

A case has been recorded in which, after three years, the atrophy of the tongue was so great that speech was much interfered with. On the other hand, cutting the trapezius part of the spinal accessory causes only a slight paralysis and shoulder drop, with some atrophy of the muscles of the neck. For these reasons and because of its accessibility, and its motility, allowing union without tension, it would seem to be the nerve of choice in this operation. Since there can come no harm from the operation, and being proven a legitimate surgical procedure, we should by all means give our unfortunate patient the chance for a cure, which this operation has been shown to give. True, it is not an operation to be undertaken without a good working knowledge of anatomy, combined with good surgical technic; but with a knowledge of these it is really one of the simplest ones we can do. There can hardly be any condition more depressing, both mentally and physically, than is the paralysis resulting from facial nerve injuries, and a successful operation means a grateful patient.

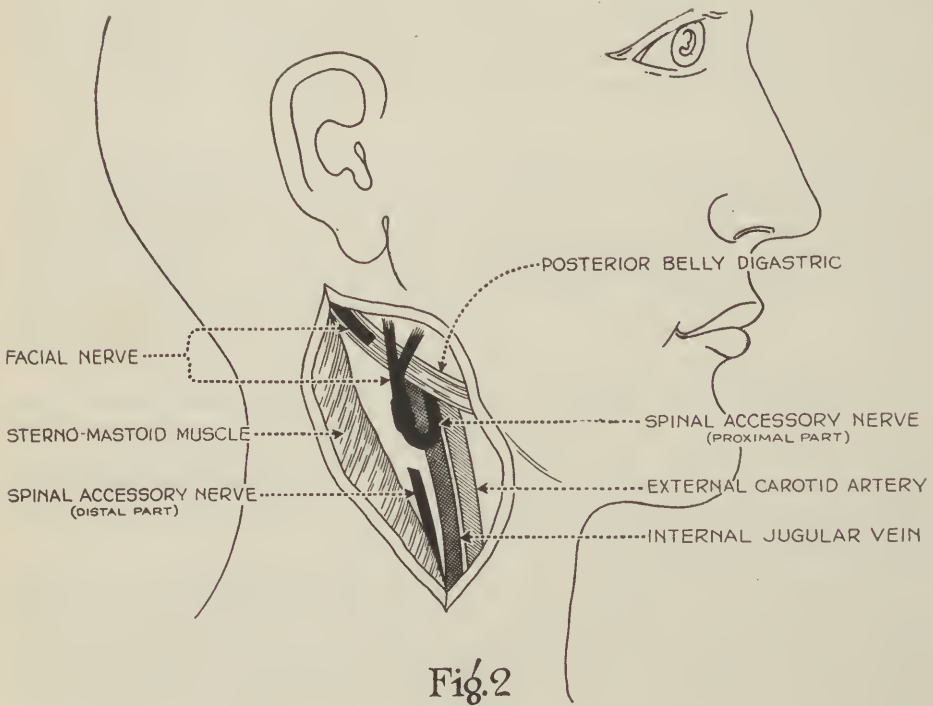
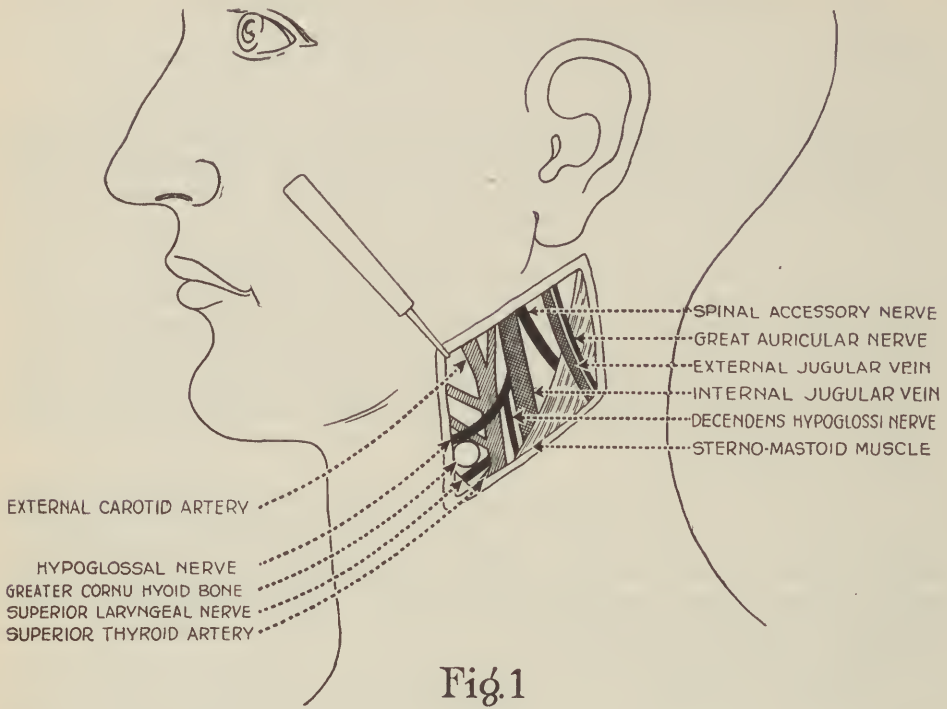
The operation is applicable to all cases of paralysis, resulting from injury to the main trunk of the facial nerve. According to Beckman (Mayo Clinic Papers, 1914) it has been used in paralysis resulting from mastoid operation, suppurative otitis media of long standing, fractures of skull involving the petrous portion of the temporal bone, and in Bell's palsy. The best results seem to have been gotten in the traumatic cases; other conditions, such as neuritis and suppurative diseases, being less hopeful.

According to Murphy, if the muscles respond to galvanism, the prognosis is more hopeful, but the absence of galvanic and faradic response is no bar to operation. The less the facial muscles are atrophied, the better the chances for a good result, even though complete nerve regeneration occurs. The success of the operation depends largely on precision in technic and gentleness in handling the nerves, combined with as nearly as possible a complete surgical asepsis, thus avoiding the formation of scar tissue. To avoid the formation of scar tissue and thus provide an interrupted path for the growth of the axons, several plans have been suggested.

1. Cargile membrane. 2. Surrounding the anastomosis by muscle or fascia. 3. Gelatin tubes hardened in formalin. 4. Fresh arteries hardened in formalin. 5. Absorbable magnesium tubes, and, 6. Fresh vein as acuff, used first by Beckman at the Mayo Clinic. He claims that in three cases where he used the vein the restoration of function has been more nearly perfect than in one case where the muscle and fat were used. Whether due to technic or coincidence, he is unable to say. He uses a section of the facial vein, external or anterior jugular, about one and one-half inches long, slipping it over the spinal accessory nerve, before the anastomosis is made, and holds it there by a few sutures.

Case—Miss G., age 25 years; well developed; nutrition good; family history negative. No diseases of childhood. At three months of age had a bad attack of acute otitis media, in both ears. The left one finally got well, without any ill results remaining, but the right one developed into a chronic condition. About this time the mother noticed that baby's face was drawn to one side, and since that time little or no improvement has taken place.

Operation, Oct. 5th, 1915. Patient was etherized, placed in the supine position, with shoulders slightly elevated and head to opposite side. An incision (Fig 1) about 7.5 cm. (3 inches) long, was made along the anterior border of the sternomastoid muscle, with its center about 5. cm. (2 inches) below the tip of the mastoid process. Having cut through the skin and superficial fascia, and opened up the cervical fascia, avoiding the external jugular vein and great auricular nerve,



expose the anterior border of the sternomastoid and draw the muscle firmly backward. Find the posterior belly of the digastric. (The spinal accessory will be found passing beneath the inferior border, obliquely backward and down under the anterior border of the sternomastoid, on its way to the trapezius muscle, which it supplies). In order to find the facial nerve, draw the sternomastoid firmly backward as before, and the nerve will be found just above the posterior body of the digastric, coming from the stylomastoid foramen, passing toward the parotid gland. It may be easily recognized by its dividing just before entering the gland. The posterior auricular artery and vein will probably need ligating, and some fibres of the great auricular nerve will be cut. The internal jugular vein is near the deep part of the wound, but there are no other important vessels anterior to the plane of the digastric, but immediately behind it lies the external carotid artery. Having isolated the nerves, bring them together, end to end, (Fig. 2) with a fine silk suture, handling them as little and as gently as possible. Then cover over the anastomosis after any of the methods heretofore mentioned.

In this case I covered the anastomosis with a part of the sternomastoid muscle, after the method of Murphy. The patient made an uninterrupted recovery from the operation, and was out of the hospital on the third day, the wound healing by first intention. The only complaint she had was soreness and pain in the region of the trapezius and sternomastoid muscles. If our operative technic was not faulty, we will expect to notice some results in the course of about four months. For a time we may expect some associated movements, when the arm is raised and lowered, but these will be of slight consequence and will give but little inconvenience.

Reports from the lady, during the latter part of December, 1915, states that she is beginning to have some twitching in the right side of her face, and when she raises her arm her mouth muscles also have some associated action—not enough, however, to bother her very much. From all reports in this case I expect her to have a good result from the operation, since the associated movements would seem to prove very conclusively that a regeneration is taking place between the anastomosed nerves. This case is reported for the reason that it should be generally known that we have at our command an operation by which it may be in most instances cured. The deformity is an ugly and distressing one, besides in a way interferes with proper nutrition because of a faulty mastication and improper salivary admixture.

FUNGUS OF THE BRAIN FOLLOWING INJURY—REPORT OF A CASE

C. S. Neer, M. D., Vinita, Okla.

When a defect in the skull and dura is combined with an increase in intracranial pressure from any cause, a hernia cerebri or protrusion of the brain through the defect, occurs. If the scalp is intact, it may not endanger life, and may even be beneficial by preventing undue compression of the brain within the skull. When, however, there is, in addition to the defect in the skull and dura, a compounding wound of the scalp, and a portion of the brain protrudes through it, with the escape of cerebro-spinal fluid, the danger to the patient is very great, death generally occurring later from meningitis if it does not follow immediately from the associated injury.

Prolapse of the brain rarely occurs except through the vault of the skull, probably from the fact that basal fractures are usually mere fissures without laceration of the dura. Instances of brain protrusion occurring at the base have been reported however, such as a case mentioned by Hewett in which a bullet entered the right malar bone and lodged in the brain. No marked symptoms occurred for seven days, when the patient became restless and delirious and a soft fungus appeared through the bullet wound, death occurring in 30 hours.

Cushing calls attention to the fact that in the foramen magnum there exists a normal opening through which a protrusion of the medulla and posterior lobe of the cerebellum may take place in cases of increased tension. The time of the appearance of the prolapse after the injury varies greatly. It may appear within twenty-four hours, or as in a case mentioned by Nancrede, it may appear after two months. When the prolapse occurs late, abscess might well be suspected as a cause of the increased intracranial pressure. The opening in the dura may not be made primarily, but may be due to sloughing. This is especially liable to occur if splinters of bone are left irritating the dura and brain beneath. A few cases have been reported in which prolapsus cerebri followed syphilitic caries.

The prolapse may remain small or may attain the size of the fist. It pulsates with the heart beat. Infection of a small prolapse may cause it to swell and attain a large size. Excision of the mass may be followed in a few days by the appearance of another just as large. If the mass becomes necrotic, large portions of the brain may be lost. There is likely to be a discharge of cerebro-spinal fluid.

The diagnosis of prolapsus cerebri is not usually difficult. Exuberant granulations might be mistaken for it, or rarely a fungating sarcoma arising from the dura or bone. The escape of cerebro-spinal fluid would be almost conclusive proof of the nature of the mass.

In the way of preventing cerebral prolapse in case of accidental injury to the skull and dura, the exposed part of the brain should be covered as far as possible with the soft tissues. As to whether the opening in the dura can safely be closed, conditions as to the extent of the injury to the brain and the probability of intracranial infection must determine that. If the brain substance has been severely lacerated, the subsequent edema and increased pressure would probably either tear out the dural stitches or cause dangerous compression. The scalp should be made to cover the defect as completely as possible, but a small drain of rubber tubing or gutta percha will often be found desirable. All spicules and projecting edges of bone should be removed. A moist antiseptic dressing under rubber tissue has the advantage of soaking up all wound secretions, thereby tending to prevent infection.

When a prolapse has occurred it is of the utmost importance to avoid infection. For a few days, or as long as the discharge of cerebro-spinal fluid is considerable, the moist dressing of iodine solution or bichloride is probably best. Later pads of sterile gauze soaked in alcohol should be applied and covered with cotton and securely bandaged. In the case here reported, powdered alum sprinkled freely over the prolapse before applying the alcohol pads seemed to cause a more rapid shrinkage of the mass. Only a moderate pressure should be used. Mayer recently reported that in one case he has successfully treated the condition by removing the prolapse and immediately covering the defect in both the skull and dura by a flap of periosteum. The flap quickly became adherent to the dura, thus putting a stop to the discharge of cerebro-spinal fluid and lessening the danger of infection. The formation of a scar adherent to the skin and extending to the brain is thus prevented. Most men who have had experience with this condition advise against removal of the prolapse either by knife or cautery. Removal is likely to be followed by a rapid recurrence. Treated expectantly, the mass may slough off or gradually shrink and heal over, as occurred in the following case:

A boy of seven, on February 17, 1913, was kicked by a horse, sustaining a compound depressed fracture of the left parietal bone. When seen two hours later he was stuporous and the pulse was considerably slowed. A very marked depression about the size of a silver dollar was noticeable in the skull, with its center at a point about one inch behind and two inches to the left of the bregma. There were two or three small wounds of the scalp.

After shaving and preparing the head, the fracture was exposed by a U shaped incision, and a triangular piece of skull measuring about 1x2 inches was found

depressed and firmly impacted. The brain substance was escaping. A trephine opening was made in the depressed piece of bone, its firm impaction permitting this to be done, and the piece removed. The edges of the opening in the skull were made smooth. A small tear was found in the dura just at the outer edge of the opening in the skull, through which the brain substance was escaping. The scalp incision was closed, leaving a small drain of rubber tubing extending obliquely down to the opening in the dura, the dural opening being about one inch lateral to the opening in the skin. There was no infection and by the next day the sensorium was clear. For several days there was increase in intracranial pressure as shown by a bulging of the scalp overlying the uncovered part of the brain. Brain substance continued for three days to escape from the opening left after removing the drain, and on the fourth day a pulsating mass of brain substance was seen to be protruding through the opening in the scalp. Cerebro-spinal fluid escaped from it drop by drop. In a few days the prolapse was as large as an olive and the escape of cerebro-spinal continued for about two weeks.

It was decided to treat the case expectantly, making every effort to prevent infection. For the first week the prolapse was protected with a moist dressing of iodine solution, after which alcohol pads covered with cotton were applied with slight pressure. Later powdered alum was sprinkled freely over the protrusion before applying the pads. In this way it was kept dry and covered with a crust. It continued gradually to decrease in size and at the end of three months had disappeared and healed over. At this time, after nearly two years, the boy is apparently entirely well.

FRACTURE OF THE HYOID BONE

Drs. Robert L. Hull and John A. Brooke, Oklahoma City.

In the review of medical literature at our command we have been unable to find a report of any number of cases or any special form of treatment given fractures of the hyoid bone. Keen's Surgery mentions but thirteen cases. It is an infrequent injury to be sure, for the hyoid bone occupies such a position that it is well protected by the inferior maxillary. The motility of the hyoid also lessens the likelihood of fracture.

This injury is most always caused in one of three ways: By direct blow; by lateral compression, as from an assailant's hand on the throat; or by hanging. The fracture is most always of the greater cornua at or near its junction with the body. The patient may feel a distinct snap, as of something giving away in the throat. Sharp pain is present on opening the mouth, moving the tongue, coughing or moving the head. There is great difficulty in swallowing. The voice is hoarse and remains changed for a long time, sometimes permanently. Dyspnoea is often present. The fragments may be driven inward and perforate the pharynx, causing hemorrhage from the mouth and marked swelling and ecchymosis of the parts near the seat of fracture. Death may occur from edema of the glottis. Fifty per cent. of the cases are fatal if the larynx is punctured.

Reduction is accomplished by moulding the fragments from without or by pressure from the finger in pharynx and counter pressure over point of fracture. If the symptoms are extreme, treatment is directed more to their relief than to the fracture. When dyspnoea is marked or edema of the glottis threatens a tracheotomy should be done. After reduction of the fracture, the head should be immobilized in a slightly extended position. This can best be accomplished by a plaster of paris collar.

A case of fracture of the hyoid came under our observation recently. It occurred in a young man age 20, who, in a friendly encounter, received a swinging blow from a fist over the right side of the neck. He complained of sharp pain just above his larynx, worse when talking, chewing or attempting to swallow.

Any motion of the head caused marked discomfort. His voice was hoarse but there was no hemorrhage from the mouth. Apparently neither pharynx nor larynx was punctured.

The case was referred to us by Dr. C. J. Fishman, who made out the lesion by the localized tenderness and associate symptoms and asked for an X-ray to confirm his diagnosis. The roentgenogram showed a fracture of the right cornu near its junction with the body. There was a distinct separation.



Twenty-four hours after the injury there was no evidence of edema of the glottis, and a plaster paris collar as shown in the accompanying cut was applied to support and immobilize the head. This afforded almost immediate relief of the symptoms and was worn for four weeks. On its removal all pain and soreness had disappeared. The voice in the meantime had regained its normal pitch.

ORGANIZED MEDICINE*

W. L. Moore, M. D., Broken Bow, Okla.

I take it for granted that in this age there is no necessity for argument in favor of organization. All that is necessary is to consider the conditions that exist in your midst. All trades and professions seem to have learned that it is one of the fundamental factors in evolution, one of the main springs in development and progress.

This is an age of organization. The lawyers have their association; preachers have synods and conferences; the press has a mighty association; the working men wield their unions as weapons of defense against oppression and by this means insure for themselves and their fellows a living wage. Even the barbers, the painters, the retail clerks, yea, all lines of trade, have their organizations through which they dictate their price and terms to the public—so much so that

*Read before the McCurtain County Medical Society Jan. 25, 1916.

you in your locality hesitate to patronize non-union labor for fear the unionized league, through their representative, will demand an explanation, and even threaten to boycott your practice if you do not recognize them. Is it not time, then, my colleagues, that we should unite for mutual protection, not only for good fellowship, but to make our profession successful financially, and to protect our brother across the street?

To the doctor, after all, money is one of the indispensables. He cannot live because people love and respect him. He cannot live even in the consciousness of superior professional ability and skill. He must sell himself for money and get the money if life is really to spell success for him. Sounds sordid, does it? But it is true and the sooner every one of us learns its truth the happier we shall all be in the end.

The average doctor earns enough money. The trouble is, he does not get it. His patrons have gotten into the bad habit of taking it for granted that his pockets are lined with the precious coin and that really he does not need to be paid, at least only rarely. They have to pay the grocer, the tailor, and the undertaker; they have dimes for the nickel shows and dollars for the theatre, but nothing or but little to defray the expenses of bringing baby into the world.

New England recently was hospitably entertaining two church conventions, a state bar association and the Clinical Congress of Surgeons of North America. The ecclesiastics among the preachers were industriously opposing modernism and modern tendencies, contending for "the faith once delivered to the saints"—of their denominations; whereas, the practical men were deploring the fact that the average preacher was compelled to live upon so small a salary that some way would have to be found to endow the work.

The lawyers deplored the fact that precedent ruled altogether too much in law; that the lawyer and the legal profession failed in enlisting public confidence and co-operation; that legal procedure seriously needed to be modernized; that too much legislation was enacted; that it is increasingly difficult for the young lawyer to make his living; that the bar association needed to learn from the medical men, who were getting millions for hospitals and colleges and who were gaining confidence of the people because of modern sanitation and medical charity work.

The Congress of Surgeons deplored nothing but ignorance, fee-splitting, inefficiency, quackery, bad hospital management and poor medical legislation. And they passed the hat for money to help build a medical museum and library, collecting upwards of \$100,000 to add to previous collections of four times that amount.

Now, here were three classes of men, representing the three ancient and honorable learned professions. The preachers divide into sects galore; have no sort of legal "recognition;" don't object at all to an immense preponderance of Class C theological seminaries and ignorant preachers who graduate therefrom; regulate their affairs to suit the majorities in their councils and conferences; have no awful "trust" to dominate them and no official organ to "dictate" to them, and do as nearly as they jolly please in either an ignorant way or a scholarly way as any class of men in America. And yet, despite the fact that they are constantly before the public and magnifying their office, the great majority of them are so under-paid that it is becoming a serious problem.

The lawyers have depended upon politics and political appointments to push them to the fore, seeking nothing from the people at large except votes; but the mere fact that there were no free legal clinics and public-serving organizations of the lawyers, took their work out of public interest and placed it in individualistic control of law, may be mentioned the large legal firm with a head not necessarily a lawyer, but who employs the very best of legal talent, making mere clerks of highly educated men working for small wages. Then, too, the trust companies, large corporations and some of the "trusts" have gone into the wholesale practice of law, making it all but impossible for the private attorney to compete.

Thus far, modern medicine seems to be giving the private practitioner a better outlook than in mediaeval theology or tradition-ridden law. But mind this: it is organized medicine alone that is doing so.

The individual units of medicine have enjoyed, are enjoying today and will enjoy in the future, the protection of the strong, the stimulus of the energetic, the knowledge of the learned and the friendliness of all; procured, generated and disseminated, as only can be, by close communication with one another through the various branches of its organization. Our own society is one of the working units of this great medical country. It is a link in the chain which holds the individual practitioner of the county to the administration, learning and power of the American Medical Association. Think, then, what it means to each and every one of us to have our names placed upon the membership roll of the McCurtain County Medical Society. Generally, it means that we stand for everything in medicine that is honorable, ethical and just; that we are aiming to relieve human suffering not because of the pecuniary gain, but because we wish to live up to the best that is in us, for we are told that "Man cannot live by bread alone." Individually, it means legal protection through the proper application of talent, money and influence afforded by the American Medical Association and the State Medical Society. It affords each one of us a stimulus for better and more careful work by granting us the privilege of placing our interesting cases and experiences before our colleagues for open discussion and intelligent criticism. It drives us out of our old narrow routine and advances our medical knowledge by the presentation before the society of thoughtfully prepared manuscripts. Lastly and probably the greatest value to all, is the close personal contact and fellowship afforded. We all meet on the same plane; we associate with one another; we talk with one another; we dine with one another, until, in the end, we are as one in the great medical world.

I wish to suggest today that we adopt a method or rules in reference to collections:

First: That every member of McCurtain County Medical Society keep a list of his bad pay.

Second: That at the end of each month or year, or when the bills are due, notify each member of those who have not settled or made satisfaction.

Third: That if such parties move to another settlement, let the doctor there demand cash in advance and satisfaction to the doctor who last treated him; also the co-operative influence of this Society and the profession in general ought to be big enough and strong enough to eliminate those whom we term shylocks.

REPORT OF CLINIC ON PELLAGRA HELD IN DALLAS, TEXAS, IN CONNECTION WITH MEETING OF SOUTHERN MEDICAL ASSOCIATION

NOVEMBER 8-11, 1915.

Following the meeting of the Southern Medical Association in Dallas, Texas, a pellagra clinic was held on Saturday, November 13, 1915, at the Baylor University School of Medicine. This clinic was one of the series of clinics given under the auspices of the Dallas physicians and surgeons for any of the visiting members of the fraternity who desired to attend. It grew out of a movement originating in the Dallas Medical and Surgical Society. At the regular meeting in August, 1915, a committee was appointed by the president, Dr. O. M. Marchman, consisting of Dr. E. S. Fortner and Dr. H. Leslie Moore, both of Dallas, the former to investigate the etiology and the latter the prevention and treatment of pellagra. Dr. W. L. Allison of Fort Worth, Texas, was asked to report on pellagra in the State of Texas. These reports were given as a part of the symposium on pellagra held in connection with the sessions of the medical section of the Southern Medical Association, which met November 8-11, 1915.

The symposium, with its live discussions, and the clinic which followed vindicate the organization and perpetuation of the Southern Medical Association. Its avowed aim is to stimulate the interest of Southern physicians to a study and solution of the medical problems peculiar to their section of the United States. It is fair to say that nowhere ever in the South has there been a more enthusiastic and comprehensive scientific discussion of the pellagra problem than there was at this time. Intellectual steel and flint were working every minute during these sessions. The world at large will soon feel the heat of the flame of investigation kindled there.

It is estimated that there are in Texas at present from 40,000 to 45,000 cases of pellagra. And the estimated death rate annually from this dread disease is 500. These estimates were made after correspondence with many physicians throughout the State. This correspondence was carried on by a few interested members of the profession and the above statistics compiled from replies to their letters.

In connection with the study of pellagra in the United States mention should be made of the splendid work of those Texas physicians who have authoritatively acquainted the medical world in Europe as well as America with the nature, prevalence and ravages of the malady. High among these stands Dr. K. H. Beall of Fort Worth, the author of the chapter on pellagra in Osler's System of Medicine.

A report of the clinic mentioned above is hereto appended. There were in attendance about ninety medical men and twenty patients, showing different phases of pellagra presented for study. A number of short discussions with the cases as illustrative were a feature of the clinic.

Dr. Homer Bruce, Opelika, Ala., spoke on the "Etiology of Pellagra." Pellagra among the better classes, he holds, occurs in those invalided and who, therefore, do not eat enough of the proper form of food to keep them up in vital resistance. He does not agree with Dr. Goldberger in his theory as to etiology, nor has he seen enough cases of associated amebiasis to lead him to pin much faith to this theory.

The gastro-intestinal phases of pellagra were discussed by Dr. H. G. Walcott, Dallas. He has seen about 100 cases of pellagra with gastro-intestinal symptoms prominent. In these, when gastric analysis was made, which was not done in every instance, there was almost always achylia gastrica. There is a characteristic odor to the stool. Two cases showed amebiasis. Trichomonads do not occur exclusively in the diarrhea of pellagra.

On the skin lessons in pellagra Dr. J. B. Shelmire, Dallas, reported his observations. These depend upon the severity and duration of dermatitis. Scaling begins in 8 to 10 days after the onset of eruption. Sometimes the latter begins with an edematous condition. The glove of pellagra does not extend as high on the flexor aspect as on the extensor. The first manifestation may be only on the points of the elbows—pigmentation and roughness. The collar is less common in this country than in Europe. One case seen by him showed the dermatitis about the genitalia alone. In the majority of cases, the eruption begins as macules, which spread, simulating sunburn and progressing to ulceration.

The hands of those not working manually look like those of the laboring classes. They are roughened and discolored. The palms are exempt. Don't jump at the conclusion that a case is pellagra from the skin symptoms alone.

Dr. R. W. Baird, Dallas, Texas, brought out some points on the etiology of pellagra. "I used to think the etiological factor was a one-sided diet. Now I am inclined to consider the disease an infection. Diet, however, does have something to do with the malady. Those, in well-to-do families, who develop pellagra, are they who eat whimsically, largely of carbohydrates, to the exclusion of proteins. I had a patient who went to Colorado. She was getting on well with a general

diet when she entered the Battle Creek institution at Boulder, Colorado, where you know they are vegetarians. She soon developed acute pellagra and died."

A case, with discussion of the treatment of the condition, was presented by Dr. C. M. Grigsby of Dallas, Texas.

"This patient complains of burning of hands and feet. The dermatitis was worse in spring. He has had mental disturbance—poor memory. Also had diarrhea. He has improved, but still had stomatitis. He has had sodium cacodylate, in the way of treatment.

Salts and thymol in treatment do not seem to do much good. I doubt whether any disease, wasting, such as pellagra and pernicious anemia, which shows a tendency to spontaneous improvement, can be cured at all. I shall treat my cases in the future, along Goldberger's suggestions. There is no definitely known cure."

Dr. Gengenbach, Denver, Colo., made some remarks on pellagra in children in Denver. He told of a boy, 20 years old, who had been living in the South. He had come to Colorado. He had pellagra and was then in extremis. Dr. Gengenbach, was called to see him. He soon died. Children have not had the one-sided diet so long as adults. Hence, if this has an effect in its production, it has not had as long a time to act. There is no pellagra indigenous to Colorado. The cases seen there are those imported from the Southern States, coming or being sent to the cooler climate of this State.

"The Lower Intestinal Symptoms of Pellagra," was the subtopic handled by Dr. B. Kinsell, Dallas, Tex. He reported one case seen by him with diarrhea, pain in the rectum and stomach symptoms. These disappeared under treatment. Rectal symptoms were the first in his cases. He had seen three other cases with prominent proctitis, foul discharge and mucous erythema.

"Some Aspects of Pellagra," was taken up by Dr. W. L. Allison, Fort Worth, Texas. "Pellagra is a good deal more prevalent than we think. It is a disease of the central nervous system. The eruption is always symmetrical, unless the nerve supply be impaired peripherally or centrally, then it appears only on the side where the nerve supply is intact. Generally the eruption is a late manifestation. I have seen pellagra bloom out following an operation. The typical pellagra mouth is never seen in any other disease except pellagra. Intense burning somewhere in the body is a dependable symptom. It may be in the stomach, on feet, hands or face. History of stomach trouble for years, with loss of weight, insomnia, parathesias—spells pellagra. Let us be constantly on the lookout for the disease. I do not have the least doubt that many pellagrins recover permanently. I believe it is a toxemia. Many toxemias recover without any treatment. Diet has nothing to do with pellagra, except to affect vitality. In some ways, pellagra is much like malaria. There is no specific treatment. We must be urgent in our therapeutic insistence that the patients stay with the treatment for a long period of time. Rest is very valuable—it is absolutely essential to put them to bed. I like sodium cacodylate, gr. 5, once a day for six days, then skipping a few days and beginning over again. Hydrochloric acid is valuable. I give diluted hydrochloric, ten to fifteen minims, three times a day, one-half hour after meals. As a mouth wash, I use potassium chlorate and citrate solution. Large doses of bismuth, one teaspoonful every second hour, will control in many cases a diarrhea that hydrochloric will not handle." Dr. Allison thinks pellagra is an insect-borne, protozoan disease.

Discussion.

Dr. Hayes of Mississippi.—"I had pellagra in my family, a little daughter, who was cared for by a negro mammy, who, two years later, died of pellagra. She was a corn bread fiend, ate it herself and fed the child on it. Most cases I have seen in the better classes declare that they do not eat meat, can't stand eggs, eat mostly carbohydrates, such as cereals, etc."

Dr. J. A. Hammack, Kennedale, Texas.—“Dr. Goldberger is very close to the mark. There is something which we take into our mouths that causes it—as corn bread.”

Dr. M. M. Smith, Dallas, Texas.—Thinks that penury, with its very protein-poor and variety-lacking diet, is a potent factor.

Dr. Dunn, Burleson, Texas.—Has seen but two cases die of pellagra. “I cannot get interested in the corn bread theory. In Jackson County they don’t eat corn bread as they used to forty years ago. Everybody has cows: it is a dairy and beef section, and yet they have pellagra. We have used cacodylate of sodium.”

PROCEEDINGS OF ST. ANTHONY’S CLINICAL SOCIETY

JANUARY 17, 1916.

Dr. A. W. White, President.

Dr. L. J. Moorman, Secretary.

Puncture Wound of the Foot.

Dr. S. R. Cunningham presented a man with a history of having stuck a nail deep into ball of the foot forty-eight hours before coming to clinic. The foot was greatly swollen with lymphangitis extending above the ankle.

Dr. Cunningham spoke of the dangers from the common types of infection, and also the advisability of employing Antitetanic serum in such cases. He outlined the following treatment: Complete rest with elevation of the foot. A generous, moist dressing consisting of glycerine, alcohol and boric acid solution covered with oiled silk. If, with this treatment, the condition is not improved within twelve hours, free incision and drainage should be instituted and Antitetanic serum for immunizing purposes.

Discussion: Dr. G. A. LaMotte, in discussing this case, states that the man’s chief danger is not from tetanus, but from infection, and he thinks that free drainage should be instituted at once. Dr. M. Smith agrees with Dr. LaMotte in that the foot should be opened and drained. Dr. R. M. Howard remarked upon the good judgement of Dr. Cunningham in impressing upon his patient the fact that this condition is one to be feared, and the importance of hospital treatment. Dr. Howard also agreed that the wound should have free drainage, and suggested a solution of creatin, 1-200.

Endo and Myocarditis.

Dr. Cunningham also presented a young woman with cardiac involvement with failure of compensation. About two years ago the patient reported to Dr. Cunningham with suppurating wound of three months standing, following an Alexander operation. She was below par physically and presented a marked lateral curvature of the spine. The wound healed promptly, and a reinforced leather jacket corrected the scoliosis. After a period of seeming good health, she began to notice fatigue and shortness of breath upon slight exertion; also a slight cough and a feeling that suggested that she might be having fever at times. These symptoms had existed for about six weeks prior to her coming to the hospital, Dec. 20th, 1915.

She entered the hospital with temperature of remitting type, going as high as 103. After a few days the temperature returned to normal, where it has remained. Dyspnoea was pronounced, and the patient could not be raised to up-right position without fainting.

Physical examination, when admitted, revealed the following: By inspection, an ashy pallor of the skin, with slight cyanosis of lips and finger tips evident; air hunger, as shown by the type of respiration. The vessels of the neck showed

increased pulsation; the cardiac impulse diffuse, with apex displaced to left about $4\frac{1}{2}$ inches from mid-sternal line. By palpation, the peripheral pulsation could be noted; the diffuse cardiac impulse and the apex beat confirmed as shown by inspection. Percussion showed the increased size of the heart, involving chiefly the left ventricle.

Upon auscultation, a soft systolic murmur could be heard, with maximum intensity at the apex and transmitted toward the axilla. A few days later a diastolic murmur could be heard with maximum intensity along the left border of sternum on a level with the third to fourth costal cartilage. Auscultation of the lungs showed moist rales in the most dependent portions and pulmonary oedema.

There has been little change in the physical signs. With the advent of the diastolic murmur, a systolic sound (pistol-shot sound) appeared in the femoral and brachial vessels and the character of pulse approached the Corrigan type. The heart seems slightly reduced in size and the patient can sit up without feeling faint.

Diagnosis, endocarditis with myocardial involvement leading to dilatation.

Treatment: Rest and digitalis.

Discussion: Dr. L. A. Rich expressed the opinion that the present condition is due to a lighting up of an old endocarditis. He also calls attention to the fact that in the presence of a diastolic murmur mitral stenosis must be considered.

Dr. A. W. White believes this to be a chronic endocarditis, first mural, then involving the valves.

Dr. G. A. LaMotte thinks there is undoubted dilatation of the heart and approves of the treatment to date, but suggests the addition of tonic means. He characteristically adds that it makes little difference what the particular valvular lesion may be.

Varicose Ulcers Treated Surgically.

Dr. R. M. Howard presented a man 28 years of age with a history of typhoid fever nine years ago. His legs were swollen for three or four months after the typhoid fever and three years later he developed extensive ulcers on both legs. These were healed by rest and two years ago they returned, and have persisted to the present time. Dr. Howard demonstrated the rapid healing of these ulcers following the recent removal of the great saphenous veins from upper thigh to mid-calf.

Discussion: Dr. Cunningham emphasized the importance of Dr. Howard's case, and the good results obtained.

Dr. A. K. West expressed great pleasure at seeing this case of Dr. Howard's and stated that he had not seen this treatment applied to such cases before, and that he had not seen such gratifying results from any other treatment.

Dr. Howard, in closing, called attention to the relation between deep and superficial veins of the lower extremities and discussed the clinical test of Trendelenburg, "who showed that in varix there is nothing to prevent a back flow of blood in the veins, and actually measured the pressure which the long column of blood exerted against the vessel walls in the leg." The test is performed by raising the leg above the level of the heart until the veins are empty. The leg is then suddenly lowered and the blood can be seen to flow back and distend the superficial vessels. If the reflux cannot be seen, it may be detected by palpation. Such a reflux will not occur if the valves in the veins are competent.

Dr. Howard also spoke of the constriction test which may be employed to determine the competency of the perforating veins which communicate between the superficial and deep veins. While the leg is still raised, if the upper thigh is sufficiently constricted to compress the superficial veins so the reflux of blood cannot take place, the superficial veins remain empty until filled by the natural circulation—three-quarters of a minute or more. If the valves in the perforating veins are incompetent, they may fill in ten to thirty seconds.

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Failure to receive the Journal should call for immediate notification of the editor, 507 Barnes Building, Muskogee, Okla.

Local news of possible interest to the medical profession, notes on removals, changes in address, deaths and weddings will be gratefully received.

Advertising of articles, drugs or compounds not approved by the Council on Pharmacy of the A. M. A. will not be accepted.

Advertising rates will be supplied on application. It is suggested that wherever possible members of the State Association should patronize our advertisers in preference to others as a matter of fair reciprocity.

EDITORIAL**SOME FACTS PERTINENT TO YOUR MEDICAL DEFENSE**

Several letters received by the Secretary's office indicate that certain phases of medical defense initiated by the State Association are not fully understood by some of the members and this is written with the idea of possibly clarifying the situation to some extent. 1916 dues are three dollars, one of the incidental benefits being medical defense.

It is successfully working in other states, in some at the price we are called on to pay.

Malpractice suits may be and are brought against all classes of practitioners. They are brought often because an honest man, who has rendered good service, attempts to collect for his services; they are brought often because your "brother practitioner" forgets your difficulties or knows nothing of them and makes statements about a case he would not make if you were there to hear what he said. His statements, too, are often misinterpreted, but nevertheless inspire suit.

The burden of defense falls as nearly equally on all members as possible.

If all members of our Association carried indemnity insurance it would cost us \$36,250.00 a year.

Suits filed against us are disposed of as follows: Filed, never pressed, finally dropped from the docket.

Second—Introduction of the plaintiff's evidence and the case thrown out on demurrer, which usually means the plaintiff had no case.

Third—A stubborn contest lasting one day or more; submission to the jury verdict.

Judgment is rendered against the physician in a few cases. If he appeals he must give bond for the costs, and if he finally loses the bond is good for the original judgment and all accrued costs, even to interest. Fortunately, in most instances, our courts are liberal in appreciating the difficulties in which an attendant is placed and the case is finally won, but what of the cost?

Considering the matter seriatim, we observe as to the first class that the physician must employ an attorney. They cost money. Second-class cases cost more money, while third-class are the most expensive of all. In none of these has the doctor a single chance to "come back." Any pauper, backed by an attorney, can raise ten dollars to file suit and you cannot cause him to raise more. He tells the court that he is a poor, wronged man without means and the court promptly orders the trial to proceed, the expenses either to be abstracted from your pocket in the end or from the money you pay into the county treasury in taxes. You are indirectly called on to pay for an assault on your own good name and means in order to protect "society." You cannot go back after it is all over and you have been legally vindicated and say: "Your Honor, I have been viciously and unwarrantedly assailed; held up to the ridicule and scorn of my fellow citizens by a worthless scrub and his scrubbiest lawyer, who I know knew better; I have been caused to spend money I worked hard and faithfully for. The scrub himself has never paid me. I move you order my expenses in this case paid out of the money I have paid to this county in taxes."

No, they would laugh you out of court and tell you your motion was not "legal." These assaults come like lightning, usually from cases the result of which was entirely beyond your control. They come from the fact that you deal in matters and problems utterly unappreciated by the average good citizen, therefore shrouded in more or less mystery, consequently subject to misunderstanding.

With these things in view is it not fair to enter into mutual arrangement to spread the burden over the entire field in such a manner that no one will be financially injured beyond a few paltry dimes? The writer believes that practically the entire Oklahoma profession will take this broad and charitable view of the matter and assume this pitifully light added burden without protest.

THE INSUFFICIENCY OF MEDICAL PRACTICE ACTS

We have had occasion before this to call attention to the fact that courts in interpreting the law when the healing art in some phase was in question, were prone to fall back on the so-called "constitutional rights" of the people. This fetish has been invoked so often to right wrongs and make utter foolishness at least technically right that we are justified in wondering what is the limit to which our legal interpreters may go.

A man of apparent common sense, who knows no law but that of justice, is amazed at the attitude of a people or their legal spokesmen who have so muddled things that in one township of a state it is legal to unqualifiedly assume charge of the seriously sick, with no investigation of the qualifications of the healer on the part of the authorities, while a few yards away in another state every safeguard is thrown around those unfortunate enough to be sick. He is amazed to see that a digest of the laws states that "Christian Science is the Practice of Medicine," "Christian Science is Not the Practice of Medicine," "Chiropractic is Practice," "It Is Not," ad nauseum. Why, may we ask, is murder, arson, theft, unlawful detainer, mortgaged property, so uniformly handled and so little attention paid to uniformity in this the most vital of all matters pertaining to the human race?

Every aggravating obstacle devisable by a legislature is placed in the way of the Harvard or Rush candidate for the license to practice medicine. To the uninitiated it looks as if he ought to be embarrassed, for has he not wasted years of his life preparing to assume charge of the sick, when his neighbor, who last year was a hardware clerk, now piously walks down the street a full-fledged "reader" in the Mary Baker G aggregation?—to be sure not licensed by law, but by that great American fetish "constitutional rights." Should some jealous, misadvised citizen try to lay him by the heels, he at once puffs up and declares his right to "worship" in the religion of his choice, and the courts often sustain him in this contention, seemingly forgetting that they are licensing him to commit possible manslaughter or murder by omission.

Theoretically the lawyers have seen to it that no one not passing a bar examination intrudes himself among them. Men who lay brick, operate locomotives or offer to do almost any technical thing are put through a severe course of sprouts, but any one of them may treat appendicitis, pneumonia or typhoid in Oklahoma by the "religious" route or as Chiropractics, with none to stay their destructive course.

It should be the sincere wish and prayer of every thoughtful person to see the day when the healing art is surrounded by practical safeguards alluded to by our law interpreters as "promoting the public welfare," now certainly more honored in dry discourse and on paper than in practice.

FEDERAL AID FOR INDIGENT TUBERCULARS.

Hon. William Kent, M. C. from California, has introduced a bill empowering the federal government to extend financial aid to state authorities in caring for tuberculous persons who are citizens of the United States, but not citizens of the state in which they are when stricken. The bill provides for an amount not exceeding 75 cents per diem for each indigent, provided the state pays an amount equal to that paid by the government. It also provides for the inspection of hospitals and sanatoria that may be designated for such purposes by the secretary of the treasury.

This bill should become a law. For many years the Western and South-western states have been a dumping ground for unfortunate tuberculous patients, who either of their own accord or on the direction of thoughtless attending physicians have been sent away from home, helpless and friendless financially, to impotently hunt the end of the rainbow of good health and recovery. The vast majority of these have become charges on the authorities and people of the states in question and finally died in abject want. The pitiable thing in the whole matter is that of the thousands of sufferers, few realize that a contented mind and absolute physical rest are the first requisites to a possible recovery. Those depending on physicians who prescribe the sunshine of the western states alone, without thought to all other surrounding factors, are indeed unfortunate and should be protected by society in the form of the organized federal government.

PERSONAL AND GENERAL NEWS

Dr. A. S. Neal has moved from Cowden to Cordell.

Dr. T. C. McCurdy, Purcell, is visiting in Atlanta, Ga.

Dr. O. W. Wilson, Bismark, has moved to Dodsonville, Texas.

Dr. Leigh F. Watson, Oklahoma City, is visiting the Mayo Clinics.

Dr. J. T. Mills, Sasakwa, is doing postgraduate work in New Orleans.

Dr. Rex. G. Bolend, Oklahoma City, has been doing special work in St. Louis.

Dr. R. L. Holt of Mangum has returned from post-graduate work in New Orleans.

Dr. Edwin Davis, Haskell, is doing special work in eye, ear, nose and throat in Chicago.

Dr. Chas. E. Davis, Woodward, has been appointed health officer of Woodward County.

Dr. S. E. Mitchell, Stigler, is doing special work in New Orleans in eye, ear nose and throat.

Dr. W. H. Bailey has assumed the directorship of the Wesley Hospital Laboratories, Oklahoma City.

Dr. J. A. Morrow, Sallisaw, has been re-elected Grand Medical Examiner of Oklahoma for the A. O. U. W.

Dr. J. Hoy Sanford, Muskogee, has returned from Chicago, where he has been doing special genito-urinary work.

Drs. J. A. Moore, Addington, and T. E. Ashinhurst, Waurika, have formed a partnership and will practice in the latter place.

Dr. J. J. Clark, Milburn, it is said will enter the race for the State Senate to succeed Dr. C. C. Shaw, who moved to McAlester.

Dr. Thomas E. Shepard of Tulsa has been sued for \$50,000 on account of the death of a child during the administration of an anesthetic.

Dr. C. M. Maupin, Waurika, has been appointed county health officer of Jefferson county to fill the vacancy caused by the death of Dr. Dixon.

Dr. D. M. Hailey, McAlester, one of the staunchest and most lovable citizens in Oklahoma and a leader of men, celebrated his seventy-sixth birthday recently.

Dr. A. C. Hirschfield, formerly of Norman, who has been serving in the Russian Navy since the outbreak of the war, has returned and will locate in Oklahoma City.

Dr. J. I. Gaston of Madill is preparing to take up special hospital work in Dallas, Tex. Dr. Gaston has lived in Madill many years and has not definitely decided where he will relocate.

The Board of Health at Carnegie has established a ruling calling for maintenance of quarantine for two weeks after administration of diphtheria antitoxin and for thirty days in cases of scarlet-fever.

Dr. R. G. Dixon, Sugden, county health officer of Jefferson county and chairman of the County Democratic Committee, was fatally wounded when his car was struck by a Rock Island passenger train and died in a few hours after the accident. His wife, who was with him, was instantly killed.

Bartlesville physicians are disgruntled over an allusion to their city and hotel rates at the annual meeting, which appeared in the Southwest Medical Journal. They assert there was no raise of rates from the normal during the annual meeting and that that city has been done an injustice by the publication of the article.

Dr. A. E. Davenport of Oklahoma City has appealed from the decision of an Oklahoma City court which fined him \$5.00 for fast driving. Dr. Davenport testified that he was in a hurry because he was going to see a sick man. This reminds us that the Oklahoma law permits physicians some little liberties not accorded to the ordinary driver.

Dr. Geo. D. McLean, Oklahoma City, has returned from a six months' service with the 23rd British Expeditionary Hospital located at Etapes, France. It will be recalled that shortly after the sinking of the Lusitania, in which Dr. John B. Murphy lost a sister, he organized a unit for service in France and Dr. McLean was assigned to that unit. Dr. McLean is of the opinion that the war will end probably in the spring of 1917 and that it will be favorable to the Allies, who have been fearfully handicapped in the matter of munitions and men, the former having to be made in enormous quantities, the latter to be trained in similar numbers; but that the forces to end the struggle are gradually being wrought into shape and that it is only a matter of time, men and iron.

COUNTY SOCIETIES.

Cleveland County elected: President, J. L. Day; vice-president, W. J. Melton; secretary-treasurer, Gayfree Ellison; censors, J. A. Davis, W. D. Griffin, J. P. Torrey; delegate, C. S. Bobo, all of Norman.

Alfalfa County elected: President, H. B. Ames, Burlington; vice-president, S. B. Growden; secretary-treasurer, L. T. Lancaster, Cherokee.

Seminole County elected: President, Guy B. Van Sandt; vice-president, T. F. Harrison; secretary-treasurer, W. L. Knight, Wewoka; delegate, A. J. Weeden, Sasakwa.

Oklahoma County elected: President, George A. LaMotte; vice president, Louis J. Moorman; secretary-treasurer, F. B. Sorgatz; censor, Robt. L. Hull. Dr. Robert L. Hull was selected as chairman of the entertainment committee for the annual meeting and will have charge of all phases of entertainment and general management of the state meeting in May.

Jefferson County elected: President J. W. Moore, Addington; vice-president, J. M. Stephens, Hastings; secretary-treasurer, J. I. Derr, Waurika; delegate, A. R. Lewis, Ryan.

Stephens County elected: President, D. M. Montgomery, Marlow; vice-president, J. P. Bartley, Comanche; secretary-treasurer, S. H. Williamson; delegate, D. Long; censor, H. C. Frie, Duncan.

Roger Mills selected as president, W. I. Wimberly, Hammon; vice-president, J. E. Gray, Durham; secretary-treasurer, Lee Dorrah, Hammon; delegate, J. P. Miller, Cheyenne.

McIntosh County met February 1 with the following program: A Symposium on Pneumonia—"Symptoms and Complications," J. H. McCulloch; "Differential Diagnosis," A. B. Montgomery; "Treatment," J. C. Watkins, Checotah; "LaGrippe," G. W. Graves, Hitchita.

Coal County selected the following officers: President, J. J. Hipes, Phillips; vice-president, F. E. Sadler, Coalgate; secretary-treasurer, A. Cates, Tupelo; delegate, F. E. Rushing; alternate, Frank Bates, Coalgate.

Greer County Medical Society held a meeting Feb. 7, with a good attendance. Several case reports were made. Greer has the distinction of having only three physicians in the county non-members.

Logan County held its annual election December 9 and elected: President, C. B. Barker; vice-president, Benton Lovelady; secretary-treasurer, E. O. Barker, Guthrie; Dr. McBride, Navine, and W. W. Rucks, Guthrie, censors. C. S. Pettet was selected as delegate.

Craig County Society met Feb. 1 in Vinita. A general discussion of quarantine, the duties of physicians and the law on the subjects considered was the order of the day.

Pontotoc County Medical Association continues to grow in interest and scope of activity. The meeting Tuesday was one of the best in the history of the organization. At the meeting in February the Association agreed to institute a post-graduate course of study, consisting of lectures by specialists and discussions by the members of the association. From the first to the eleventh of March the association conducted its first campaign for better health conditions throughout the county. This is Baby Week. Drs. Threlkeld and Lewis of Ada, Harrison and Harrison of Stonewall, Ritchie and Threlkeld of Francis and Wilkerson and Hill of Roff were appointed as a committee to conduct the campaign.

Payne County elected: President, C. W. Bacon, Yale; vice-president, E. M. Harris, Cushing; secretary-treasurer, J. B. Murphy, Stillwater.

Texas County elected: President, W. H. Langston, Guymon; secretary, R. B. Hayes, Guymon.

Jackson County held its annual election of officers in Altus, February 4th, electing: President, D. L. Garret, Altus; vice-president, John S. Stultz, Olustee; secretary-treasurer, Raymond H. Fox, Altus (re elected); censor, R. E. Abernathy, Altus; delegate, W. H. Rutland, Altus. James L. Lowe, Humphrey, was elected to membership.

CORRESPONDENCE AND MISCELLANEOUS

Dewar, Oklahoma, February 10, 1916.

Dear Doctor Thompson: I want to call your attention to a letter I received from the State Board or Industrial Commission in re fees charged for attention to emergency and surgical cases. This letter was the outcome of my trying to collect from the Sunlight Oil Company a fee of \$35.00 for attention to one of their employes for a fracture of the elbow, where both the condyles of the humerus were broken. It was a very reasonable fee, but the Sunlight people protested that it was unreasonable to the Industrial Commission and the Commission tried to bluff me into accepting a smaller fee, which I refused. They paid me my \$35.00 after I had written the Commission in answer to their letter and sent them a fee bill of the average fees for such work in thirty-six states. There seems to be a tendency of the Industrial Commission to assist the insurance companies to reduce the regular fees of the surgeon and, as you will see by the letter, they throw out a threat to the profession that if they do not, they will make a fee table that will not be so remunerative as the surgeon would like. I have heard no more from them.

Respectfully,

W. G. BRYMER.

STATE INDUSTRIAL COMMISSION

State of Oklahoma

Oklahoma City, December 17, 1915.

Dr. W. G. Brymer, Dewar, Oklahoma.

Re Mat J. Burnett vs. Sunlight Oil Company.

Dear Sir: The Commission is in receipt of your letter of December 15th complaining that your bill for medical services rendered in the above case has not been paid. I am sending you, under separate cover, a copy of the Workmen's Compensation Law of the State of Oklahoma. If you will examine the same on page eleven you will find the law in regard to the payment of doctors, and a further examination of the Act will show you that every employer is required to carry insurance for the payment of the benefits provided by the act, and that these awards for the payment of medical expenses are paid by the insurance carrier.

Our files show that we received a letter from you on November 29th, and on the same day we wrote the Sunlight Oil Company calling their attention to the matter. We received a carbon copy of a letter written by Mr. O. W. Julien to their Muskogee agency, Messrs. Butz & Wisener, asking them to obtain your bill and forward it in, as they had never received it.

You enclose a letter written you by the Sunlight Oil Company on December 13th requesting that you send your bill to Mr. Julien at Kansas City, and that he would attend to it. I think if you will comply with that request you will have no trouble in getting a settlement.

Without directing this remark personally to you, as I do not know you, I think if the doctors of this state would make reasonable charges and attempt to assist the Commission in administering this law in a manner that will give satisfaction to everybody, there would be a great deal less friction. The great amount of trouble we have is occasioned by the policy of some physicians in this state attempting to hold up insurance companies for the payment of these bills for medical services, and unless more

fairness is shown by the medical profession this Commission is going to have to establish a schedule of fees, and if we are forced to do this, I think a great many doctors in this state will be dissatisfied with the schedule that we prescribe.

You may consider that you have been "bull-ragged," but on the other hand many insurance companies feel that they have been held up.

Yours very truly,

A. A. McDONALD, Chairman.

Dewar, Oklahoma, December 20, 1915.

A. A. McDonald, Chairman State Industrial Commission, Oklahoma City, Okla.

Dear Sir: Yours of 17th inst. received and contents noted. You misunderstood my letter of the 15th. I had on Oct. 10th mailed my bill to the Sunlight Oil Company and had made a report to their Company, all in due form, and my charges were the minimum for this piece of work. (My work is charged for according to a fee bill compiled from an average fee bill of thirty-six states, a copy of which I enclose herewith). I do not know what some surgeons are charging, but for my services I must insist on the same fee from a corporation or insurance company as I would from my average private practice, and I assure you that as long as the State Association stands together as a body we will contend for our just rights regardless of any insurance company or corporation.

Respectfully,

W. G. BRYMER.

THE EDITOR AND THE DOCTOR

The little boy in town was asked by his father to write an essay on editors and here is the result: I don't know how newspapers came to be in the world. I don't think God does, for he ain't got nothing to say about them and editors in the Bible. I think he is one of the missing links you read of and stayed in the bushes until after the flood and then came out and wrote the thing up, and has been here ever since. I don't think he ever dies; I never saw a dead one and never heard of one being licked. Our paper is a mighty good one. Paw ain't paid his subscription since the paper started. I asked paw if that was why a editor had to suck the juice out of snowballs in winter and go to bed when he had a shirt washed in summer. And then paw took me out into the woodshed and he licked me awful hard. If the editor makes a mistake folks say he ought to be hung; but if a doctor makes a mistake he buries it and people dassent say anything because doctors can read and write latin. When an editor makes a mistake there are lawsuits, and a big fuss; but if a doctor makes one there is a funeral, cut flowers and a perfect silence. If the doctor goes to see another man's wife he charges for the visit, but if the editor goes, he gets a charge of buckshot. When a doctor gets drunk it's a case of being overcome with the heat, and if he dies it's heart trouble; when an editor gets drunk it's a case of two much booze, and if he dies it's the jimjams.—*Ex.*

GIVING LESSONS ON HEALTH

There was a time when physicians did not go about telling the people how to retain their health. Nobody will go so far as to say that physicians regarded sickness as an asset to the extent that they fostered it, but—well, the doctors were there to cure those who were ailing.

Now there seems very little excuse for any person to be sick, unless they unwittingly come in contact with a contagious disease or develop an ailment by some unforeseen accident. The health department of this state is doing a great work for the residents of Oklahoma through the health lectures that are being given by way of publication in the newspapers. These articles contain a great deal of sound sense and many instructions for avoiding ailments.

Publications dealing with various phases of healthful living were never more numerous than they are now. New books are being written and there are many magazines devoted to this subject alone. Newspapers maintain health departments, in which competent physicians answer all the questions that are asked by the readers.

The attitude of the physicians themselves has changed, and doctors of high standing, whose ethical standards are beyond criticism, are contributing from their abundant knowledge to magazines and periodicals some splendid articles on the subject of health. Concern in healthful living and personal hygiene is everywhere increasing.

In nearly every written article or spoken lecture given to the public, the subject of fresh air is emphasized, and outdoor life is recommended. This is after all, the principal theory of health.—*Oklahoma City Times.*

The medical fraternity adopts and adheres to a scale of prices. The newspaper craft has never found it possible to reach uniformity. A Kansas exchange makes the following suggestions for fees: "Calling a lazy loafer a successful citizen, \$2.70; referring to a deceased poker player as being greatly missed, \$10.13; calling a moral coward a hero, \$6.21; calling a second rate speaker an eminent orator, 60c; referring to a business man who doesn't advertise as a progressive citizen, \$4.99; sending a mean sinner to heaven, \$5; lambasting the pros at the request of the antis, \$6.77; lambasting the antis at the request of the pros, \$5.77."—*Custer City (Okla) Courier.*

The council of the Chicago Medical society, which recommended the expulsion of Dr. H. J. Haiselden, of Bollinger baby fame, has explained that it was not on account of the Bollinger case, but because Dr. Haiselden was unethical in having written a series of articles about it; but it may have been because the other physicians were slightly envious of his fame.—*Oklahoman*.

LA GRIPPE.

Deadly germs infest the air;
La grippe, full-grown, is now the rage;
Friends, cousins and maidens fair
Will all with it perchance engage.

My poor old head is wrecked with pain—
Fells like an immense carbuncle;
Dim are my eyes and blurred my brain—
I would not know my rich uncle.

My hands and feet are as cold as stones.
How that cold air makes me shake,
And freezes the marrow in my bones,
And makes my muscles writhe and ache!

My chest by aches and pains is shattered,
And at deep breathing kicks;
My voice seems to have been battered
Between two paving bricks.

I do not care for any food—
My appetite's on the shelf,
And he who claims roast pork is good
Must be part hog himself.

When Congress again assembles
And is ready in business to dip,
Let's get up a petition and ask that
It pension each guy with the grip.

—Contributed by G. A. Waters, M. D., Lenepah, Okla.

SURGICAL AND THERAPEUTIC NOTES

Every surgeon experiences the disagreeable feature of treating suppurating wounds and wounds with profuse drainage. Excoriation of the skin often complicates the treatment, making the patient most uncomfortable even with frequent dressing. I have especial reference to urinary drainage following cystostomy. A method of dressing most satisfactory to me is as follows: In the center of a piece of rubber dam, 14 inches by 20 inches, cut an opening two to three inches in diameter, place the dam over the abdominal wound with drainage through the large hole. (2nd). Cut a piece of adhesive plaster, 6 inches to 8 inches in diameter, in the center of which an opening is made sufficiently large to surround the wound. Everything dry, the adhesive is placed face down, sticking a margin 1 inch to 1½ inches around wound to skin and a similar width out onto rubber. Dressing may be folded up in this to absorb drainage from pus cavity or gall bladder; or folded so as to drain into a rubber urinal if patient is to be in an upright position.

Deep wounds following pus drainage often result. Many wipe them out with cotton pledgets, much to the discomfort of the patient. May we not suggest that these cavities be washed out gently with some warm solution (3-10 saline or water). A small glass syringe or syringe and catheter work well. If undue pressure is avoided no harm can result from washing out even deep sinuses. A return flow catheter is especially useful in these cases.

—F. Y. C.

To make two boils grow where one grew before, or to make a ring of satellites about a center, one has but to scratch the adjacent skin, cover with a flax seed poultice and leave the rest to nature.

—Douglas H. Stewart.

The Allen treatment of diabetes is a radical departure from the methods that have been generally accepted in recent years. The most important features are: (1) Absolute fasting from four to five days. (2) Under feeding. (3) Careful determination of and avoidance of exceeding the tolerance of the patient, not only for carbohydrates and proteids (as under former methods), but also for fats. (4) Careful avoidance of increase of weight unless the patient be decidedly underweight.

The advantages of the Allen treatment are: (a) More rapid and certain abolition of the Glycosuria. (b) More rapid and successful building up of the carbohydrate tolerance. (c) Prompt and complete relief of acidosis and as a result prevention of, if present, the clearing up of the most serious of the results of diabetes, diabetic coma.

NEW REMEDIES ACCEPTED BY COUNCIL ON PHARMACY AND CHEMISTRY, A. M. A.

Diphtheria Immunity Test (Schiek Test).—This test is intended to determine those persons who have not in their blood an amount of diphtheria antitoxin sufficient to render them immune to diphtheria. The test is of special value for use in institutions and among groups of persons exposed to diphtheria, in order that it may be determined which individuals should be given an immunizing dose of diphtheria antitoxin. It is also of value in the diagnosis of other conditions simulating diphtheria infections.

Diphtheria Toxin Standardized (Schiek Test).—Marketed in sealed capillary tubes each containing a solution of one-fiftieth of a minimal lethal dose for guinea pigs of diphtheria toxin. H. K. Mulford Co., Philadelphia, Pa. (Jour., A. M. A., Jan. 15, 1916, p. 191).

PROPAGANDA FOR REFORM

Protonuclein and Protonuclein Beta.—Eight years ago the Council on Pharmacy and Chemistry published a painstaking and exhaustive report on Protonuclein and other products of Reed and Carnrick. This report showed conclusively that the whole theory of nuclein therapy was a tissue of speculation, into whose texture are woven only a few slender threads of fact. Now the Council re-affirms its former action with regard to Protonuclein. The objections to Protonuclein apply with equal force to Protonuclein Beta, said to be Protonuclein mixed with equal amounts of nucleoplasm and protoplasm of the spleen. In view of the lack of evidence the claims made for Protonuclein Beta are unwarranted. The Council, therefore, reports that it is ineligible for New and Nonofficial Remedies. (Jour. A. M. A., Jan. 1, 1916, p. 38 and 48).

The Composition of Liquid Petrolatum.—As naphthene hydrocarbons predominate in Russian crude petroleum and paraffin hydrocarbons in many or most American crude petroleum, it was assumed that the petrolatums derived from these sources differed from each other in like manner. While both the naphthenes and paraffins are chemically inert, some unexplained therapeutic superiority has been asserted to reside in Russian liquid petrolatum. Benjamin T. Brooks, of the Mellon Institute, explains that most so-called "minerals oils" used for therapeutic purposes contain no paraffin hydrocarbons whatever and that, regardless of the source of the crude petroleum, the fraction which constitutes the liquid petrolatum is composed essentially of naphthenes and polynaphthenes. (Jour. A. M. A., Jan. 1, 1916, p. 38.).

Fulton's Compounds.—A "Bulletin" sent out by the promoters of Fulton's Renal Compound and Fulton's Diabetic Compound gives an account of the alleged good results of the treatment in the case of a Mr. J. J. Pennepacker. The columns of a local newspaper announce the amputation of this man's leg for diabetes. (Jour. A. M. A., Jan. 29, 1916, p. 373).

ESTABLISHMENT OF A DEPARTMENT OF HYGIENE, SANITATION AND EPIDEMIOLOGY

The H. K. Mulford Company announces the establishment of a department of Sanitation and Epidemiology, under the executive management of Thomas W. Jackson, M.D., expert in preventive medicine, sanitation and the study and control of epidemic diseases.

The most important subjects before the American people at the present time relate to the public health. Work in this field is frequently beyond the reach of the existing health and sanitary departments of the various municipalities and smaller towns, on account of limited appropriations.

The department does not propose to enter into competition with the constituted public health authorities, local, state or federal, but to aid and assist these authorities in every possible way. The work is essentially one of service and education, and will be developed along these lines. The resources and equipment of the Mulford Laboratories, chemical and bacteriological, will be utilized, thus placing at the disposal of the new department the entire laboratory facilities and expert services of the H. K. Mulford Company.

NEW BOOKS

In this department publications sent THE JOURNAL will be acknowledged as they are received. Reviews of new publications will be made only as space and time permit. Publishers are requested to bear this in mind in forwarding books, etc., for review.

SURGICAL OPERATIONS WITH LOCAL ANESTHESIA

Second edition, by Arthur E. Hertzler, A. M., M. D., Ph. D., F. A. C. S., Surgeon to the Halsted Hospital, Kansas; Swedish Hospital, Kansas City, Mo., General Hospital, Kansas City, Mo. 327 pages; 173 illustrations; cloth bound; price \$3.00. Surgery Publishing Company, New York.

The rapid sale of the first edition covering minor surgery and the demand for a more complete work upon the subject covering both major and minor surgical work, has induced Dr. Hertzler to present this second volume, which for completeness as to detail and price we believe places it in a class by itself among those text-books upon this most interesting and growing subject.

Dr. Hertzler's vast surgical experience and his work with local anesthesia particularly fits him as an authority upon this subject and thus the second edition of this book places within the hands of the doctor a manual which for completeness and comprehensiveness particularly recommends it.

From a review of this book Dr. Hertzler seems to have overlooked no point of major or minor importance. The large number of illustrations clearly places up to the eye of the reader the text of the book and both the general practitioner and surgeon will appreciate this work as a reliable guide in their operation work under local anesthesia.

THE MEDICAL CLINICS OF CHICAGO

Volume 1, Number 4, January, 1916; 222 pages; illustrated. Philadelphia and London, W. B. Saunders Company, 1915. Price per year, paper, \$8.00; cloth \$12.00.

This issue contains an article on the technique of lumbar puncture by Dr. Frederick Tice, who states that under proper conditions, not less than 80 per cent. of epidemic cerebro-spinal meningitis may be saved with Flexner's Serum. Those who have faced this understand the correctness of the statement and the very great worth of that system of treatment which is the only thing that will save life is epidemic meningitis. However, the general understanding is that the mortality of this type of meningitis has increased more by procrastination in diagnosis and insufficient treatment than by all other factors combined, the problem being to get the patient treated early enough.

Primary Carcinoma of the Liver Resembling Duodenal Ulcer and Chronic Indigestion is a rarity well handled and considered by Dr. Walter Hamberger.

The Shiek Reaction, an interpretation of this valuable diagnostic adjunct in diphtheria, is contributed by Dr. George H. Weaver of the Durand Hospital.

Pleurisy With Effusion is handled by Dr. Robert B. Preble.

Infantile La Grippe, certainly and entertaining subject at this time, is considered by Dr. Isaac A. Abt, who considered a baby with "nothing but a cold" a subject for study as a serious problem.

The book is a splendid contribution.

AMERICAN ILLUSTRATED MEDICAL DICTIONARY (DORLAND)

A new and complete dictionary of terms used in Medicine, Surgery, Dentistry, Pharmacy, Chemistry, Veterinary Science, Nursing, Biology and kindred branches, with new and elaborate tables. Eighth revised edition. Edited by W. A. Newman Dorland, M.D. Large octavo of 1135 pages, with 331 illustrations, 119 in colors. Containing over 1500 more terms than the previous edition. Philadelphia and London: W. B. Saunders Company, 1915. Flexible Leather, \$4.50 net; thumb index, \$5.00 net.

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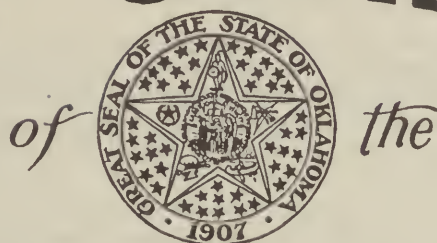
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ATYPICAL MASTOIDITIS*

L. C. KUYRKENDALL, M. D., McAlester, Okla.

In writing a paper on mastoiditis, I feel I am dealing with a subject too often overlooked by the general practitioner as well as the ear men. How often have we heard some physician say: "Oh, it does not amount to anything; it's only a running ear; use this wash in the ear and you (or the child, as the case may be,) will get all right." Gentlemen, that, in my estimation, is little short of criminal negligence.

Atypical Mastoiditis, the subject of this paper, is a condition in which the mastoid cell or cells are directly responsible for your symptoms, none or at least very few of which are typical of mastoiditis. It is not necessary for me to go into the anatomy of the ear or mastoid, as all of you are familiar with that and it would take up too much time.

I will first take up the symptoms of mastoiditis as we usually find them and compare them later with the two cases I wish to present.

The symptoms of acute mastoiditis are: (a) Pain which involves not only the mastoid, but very frequently the whole side of the head. (b) Tenderness on pressure over the mastoid, which persists with or without discharge from the ear. (c) Fever: The fever is usually in proportion to the amount of suppuration and necrosis that has taken place, but is not a reliable guide by any means. (d) Swelling and congestion of the upper posterior part of the meatus. (e) Congestion and bulging of Shrapnell's membrane directly contiguous with the tissues of the meatus. (f) Bulging of skin over the mastoid process in conjunction with the above symptoms, more pronounced in children than in adults. (g) In children you may have delirium and very high fever, with intracranial complications. (h) Discharge from the ear extending over a period of time usually associated with polypi. (i) Involvement of the labyrinth as shown by dizziness, nystagmus, nausea, and staggering gait.

Case 1. Mrs. W. A. H., married, age 49, was referred to Dr. G. E. Hartshorne and myself by Dr. J. A. Smith of McAlester, her family physician, whom she had consulted for a general run-down condition.

She gave the following history: When she was about 8 or 10 years of age she had a severe spell of ear-ache which lasted for a number of days; she gradually grew so deaf she could not hear anything unless it was a very loud noise and close to her; finally the ears began to discharge, the hearing improved and after discharging for a few weeks ceased altogether. She had no more trouble with her

*Read in Section on Eye, Ear, Nose and Throat, Bartlesville, Okla., May, 1915.

ears until she was 25 years of age, at which time she had a severe pain in one of them which lasted only a few minutes.

In the latter part of May, 1914, her left ear began to throb and feel queer with a constantly increasing pain in the ear; there was no pain whatever over the mastoid. The "whole inner works of the ear began to swell and produce a burning and itching sensation." The pain later would come and go and was not constant as to time or location. Once it felt as if the "bone back of the ear was crushing to pieces."

Upon examination we found no tenderness over the mastoid, no fever, nor was there any swelling over the mastoid bone. Upon examining the external auditory canal, it was found to be filled with a cholesteatoma, blocking the canal until a view of the tympanic membrane was impossible. On August 22, 1914, under general anaesthesia this cholesteatoma was curetted out thoroughly. She improved for about three days, then symptoms of mastoiditis appeared, whereupon I did a radical mastoid on September 4th, with subsidence of all symptoms. The recovery was slow and tedious. The point I wish to bring out in this case is the entire absence of mastoid symptoms until after the removal of the cholesteatoma, yet I feel sure the mastoiditis was present for quite a while, because upon operation I found a pneumatic cell type of mastoiditis, the cells numbering several hundred and each one full of pus. The necrosis was extensive, also the bone through which I had to chisel had undergone an eburnizing process to such an extent it was just like cutting through marble. This I consider the most important feature of this case, as it, without question, was the reason we were unable to obtain pain upon pressure. This I think can very often happen and, when it does, will cause the symptoms to be masked to such an extent that the condition may be easily overlooked.

Case No. 2. E. A. B., age 45, single, lawyer. Consulted Dr. G. E. Harts-horne and myself, November 30th, 1914. He gave the following history: He had measles when 2 years of age. Discharge from the ear, which made frequent cleansing necessary. No pain or other inconvenience than need of cleaning felt until about three years ago, when occasionally felt dizzy spells, was constantly treated for biliousness, suffered loss of appetite, would vomit frequently after meals, and was under treatment for months for "stomach trouble." Dizzy spells became more frequent, and would lose about two out of three meals. Medicines given and treatment for stomach trouble and for biliousness were without results. For last three years suffered loss of ambition, work was drudgery, attention to work and concentration difficult. Had always had strong constitution, was naturally industrious and ambitious. Suffered from nervousness for about a year after operation. Ambition and love of work restored, normal weight regained. No discharge from the ear and none of the other symptoms have returned.

Upon examination we found as in the previous case, no fever or swelling, but by making very hard pressure over the tip of the mastoid we were able to elicit pain. Examination of the external auditory canal and tympanic membrane showed no swelling of the tissues of the meatus, but there was a large opening in the tympanic membrane in the posterior quadrant, through which a bead of pus was showing; this when wiped away was followed in a few minutes by another making its appearance. With the history outlined above and our findings upon examination, a radical mastoid was advised. This we did on December 1, 1914. The mastoid bone was the hardest I have ever seen. There was but one mastoid cell and it was about the size of an English pea. Upon opening it, it was found to contain pus. The opening made was from 5-8 to 3-4 of an inch deep before the mastoid cell was reached.

The important features of this case were the lack of typical symptoms of mastoiditis, other than occasional dizziness, which was due to a serous labyrinthitis, the period of time over which his trouble extended, the absence of physical signs and the hardened or eburnized condition of the mastoid bone.

CONSTIPATION OF INFANTS AND CHILDREN*

W. M. TAYLOR, M. D., Oklahoma City, Okla.

That the constipated baby is a healthy baby is often heard. While this seems often true of the infant it is never true of the child. Constipation may be present in infants and children, though they go to stool more than once daily; the sigmoid being full and only the lower bowel emptying itself, though repeated efforts evidence the inclination. There should be at least one free bowel evacuation daily, although in some infants and children two or three seem to be normal.

The causes operating in the production of this condition are not always the same in infants and children. Heredity may play a part insofar as a weakened musculature may be transmitted, disposing to constipation. Anatomical peculiarities, as in Hirschsprung's disease, a dilated colon; the relative length of the colon in proportion to that of the small intestine; the winding course and twists of the sigmoid flexure.

Some of the most persistent cases of constipation I have ever seen have been in breast-fed infants from a low fat percentage and constipated mother. An atonic condition of the intestine often shared in by the other muscles of the body, as in cases of marked rickets. Rickets and constipation are often associated conditions. It seems that in some cases the nerve supply to the lower bowel is poorly developed and that even though the fecal matter be present in that portion of the bowel, it fails to stimulate the expulsion effort necessary. Deficient secretions of the glands of the intestinal mucous membrane are often seen following acute catarrhal conditions of the large bowel. In these conditions we have often a constipation alternating with a diarrhoea, explained, I think, by the constipation following as a result of lessened normal intestinal secretions, and the mucous membrane, being in a sensitive state, is over-stimulated by the presence of the fecal matter.

In bottle babies we get this condition from too low fat percentage as in breast-fed babies. But we must also remember that we may get it from a too high fat content, the presence of the high fat percentage being evidenced by a white, dry, crumbly bowel movement, composed of unutilized fat in the form of soaps.

Habit forms a very important part because, in older children, who do not take time to go, or do not take sufficient time to have more than a partial stool. Sometimes we are misled by the child or the parents even when we are told that the child has a movement daily, and we find on close questioning or examination that the child is more or less constipated all the while. In these cases we find the feces are dark, dry and often covered with mucus. I have seen children strain and even cry from the exertion of trying to empty the bowels in this condition. Fecal masses may often be felt on pressure through the abdominal muscles over the sigmoid flexure.

The lack of food having sufficient residue to stimulate the necessary peristalsis is a cause often in children. Too much milk or an exclusive milk diet in a child to the exclusion of cereals, vegetables and fruits. Of the mechanical causes which may operate reflexly in its production, the most frequent is, perhaps, fissure of the anus. Also hemorrhoids may produce the spasmodic type.

A case came under my observation a few months ago which illustrates this condition well: Infant, 15 months old, fed for the most part of the first year on condensed milk, developed a well marked rachitic condition, with the usual soft, flabby muscles and prominent abdomen. At my suggestion the baby was put on whole milk for awhile and did well. Later on top milk, of which I found later the fat content was about 6 per cent. The child became constipated; the dry, white crumbly stools were at times covered with mucous and again with a bright streak of blood. The child had such intense pain when put on her chair for de-

fecation that she would jump to her feet and run about the room screaming with pain unless her mother would hold her. With the history of the case, the character of the food and the symptoms, the examination which disclosed a fissure of anus, the diagnosis was clear, namely, rickets and fissure of anus, with constipation of the spasmodic type. This constipation was produced by excess of fat in food and exaggerated by fissure which the constipation produced.

In infants and children we have a large variety of symptoms depending upon it. As Griffith describes it, "We have in this category chronic loss of appetite, recurrent abdominal pain, obstinate eczema, hernia, irregular attacks of fever, persistent or recurrent headaches, frequent attacks of vomiting, insomnia, convulsions and a large array of other nervous symptoms which often cannot be controlled until the chronic constipation is relieved.

Dietetic Remedies

In the breast-fed infant, if we find the fat content too low, we may increase this through the mother. Alcohol or malt drinks and red meats have more nearly a specific effect in increasing the fat percent in the mother's milk than any other food measure. It is usually only in the bottle-fed baby that we have the constipation following the excess of fat. In these babies it may be necessary to alternate the use of suppositories, soap sticks and enemas. The enemas are better given plain and hot. Glycerine suppositories should not be used for any length of time, for they do invariably set up some irritation if persisted in and each insertion is followed by a straining, tenesmus and passage of mucous. On the other hand the enemas often lose their effect, so it is best to alternate, if one is necessary.

I think the glycerine suppository should only be used in an emergency. Castor oil leaves the bowel constipated and should only be used for a specific effect. My experience in the giving of cream in addition to the breast feeding has not been satisfactory. Malted milk or any of the malted sugars, as a result of the laxative effect of the sugar, may be given daily in the place of one or two breast feedings with very satisfactory results. It has been my experience that some infants are constipated during the first years of life despite all the plans for relief tried. The syrup of senna and milk of magnesia give the best results of the so-called drugs at this age.

In bottle-fed infants, in addition to the remedies mentioned for the breast-fed baby, we may add cereal waters, plain or dextrinized, to some advantage. Mellins Food is a fair example of this plan, the starch having been converted into maltose. Milk of magnesia may be conveniently added to the bottle night and morning, one teaspoonful once or twice daily as necessary. It does not change the taste of the milk to any extent. Even during the first year of life, the habit of having the bowels to act at a regular time goes far toward preventing or relieving this habit.

I have not found the liquid petroleum preparations as satisfactory in relieving infants as older children. After the fifth or sixth months, orange juice in two teaspoonsful, at a time, as far removed from milk feeding as possible, should be tried. It is the best of the fruit juices for infants and children. If they do not take it readily, there is no objection to having it sweetened.

In other children we hope to find relief from the possibilities of a broader scope in their diet. Vegetables, such as potatoes, asparagus tips, lettuce, spinach, all thoroughly cooked; stewed fruits, as prunes, apples, etc. The coarser food stuffs may be here used as in adults, oat meal, corn bread and graham bread. I have not had success in giving the brans; as a rule the child will not take them, though with cream and sugar they are fairly palatable.

For older children, of the purgative drugs the cascara preparations, preferably the liquid aromatic cascara, seems to be by far the best, and I think the only one that of itself tends to relieve the conditions. It does, undoubtedly, have a

tonic effect on the musculature of the bowels and also stimulates the activity of the intestinal glands.

Tincture nucis vomicae, in proper dosage, does great good by stimulating secretions along the digestive tract. My plan is to give the tincture of *nux. vom.* before meals and the cascara after meals, not at a single dose, but after each meal. By this means the dosage is not necessarily large and may be better regulated to the case in hand. Each day the dosage is reduced as it seems permissible, and often in a short time entirely withdrawn.

The oil injection method is well worth trying in those cases where the stools are hard and produce straining. The plan, as ordinarily carried out, fails often because sufficient oil is not used. The best plan is to inject from 4 to 6 or 8 ounces at bed time instead of the usual amount of one or two ounces. This should be well injected up into the rectum, using either olive oil, liquid albolene or any of the bland oils. If this is done at bed time and allowed to remain, as it usually will, until the next morning, a soft movement follows. If this is not sufficient to stimulate the bowels' movement, a small dose of any of the mild salines are in order, the Pluto or Abilena acting very nicely. This saline may often be discontinued and the oil injection lessened in amount. By relieving the child of straining and pain so often felt, due to the soft movement, he will be more willing to go at a regular time and make an effort, all of which is necessary.

Recently a great deal has been said about the use of mineral oils, and I might say here that while some discussion has been going on as to the so-called heavy, light, American and Russian oils, the A. M. A. Committee on Pharmacology have gotten sufficient data from a number of leading internists, who report that there is no practical difference in the American petroleum or the Russian; the heavy or the light oils. In giving the petroleum, it has been found just as satisfactory to give the full amount necessary at one dose; preferably at bed time. They act by their lubricating effect, are not absorbed at all and have an intestinal antiseptic effect. Aromatic Liquid Albolene is the preparation which seems most palatable to children. I have had some very remarkable success in a few cases and am at present giving it a thorough trial, through I expect the best results from the class of patients mentioned. It should be equally satisfactory in infants and children, but in a few cases it seems to nauseate and then some regurgitation follows it.

Our list of therapeutic agents would not be complete without mentioning massage. Gentle massage over the course of the colon, beginning low down over the right side and following course of colon down to sigmoid flexure. This is only of advantage when combined with dietetic and other remedial agents, a few of which have been mentioned. Hygienic conditions, as they effect the general health of the child, must also be considered with proper exercise.

THE IMPORTANCE OF EARLY DIAGNOSIS IN EXOPHTHALMIC GOITER.

LEIGH F. WATSON, M. D., Oklahoma City, Okla.

The syndrome of symptoms known as "exophthalmic goiter," or hyperthyroidism, was described first by Parry in 1825, by Graves in 1835, and by Basedow in 1840. Mobius, in 1886, was the first to suggest that the symptoms of hyperthyroidism were due to changes in the thyroid and an alteration or perversion of its secretion. Baumann, in 1895, discovered iodothyryn, which is the most important chemical constituent of the thyroid. Kendall, in 1915, isolated from the thyroid two active principles: Substance "A," injected into a normal individual increases pulse rate, vigor, metabolism and nervous irritability; substance "B," promotes the growth of cretins and has a specific action in myxedema.

When enlargement of the thyroid gland occurs at puberty, menstruation, or pregnancy, it may be physiologic and temporary; if it follows parturition, accident,

fright, or other severe emotional strain, it is more liable to be pathologic. Ninety per cent. of all goiters occur in women.

Simple goiter may change into the exophthalmic or toxic type at any time. Too frequently the physician advises the patient with beginning hyperthyroidism, that the goiter will disappear of its own accord. It is true that a majority of "physiologic" goiters will disappear if left alone; however, if tumor does not disappear within a few weeks, or if it recurs, the probability of its permanent subsidence without treatment is remote. It is a mistake to neglect the small beginning goiter, because it is this type that responds most easily to treatment.

Diagnosis and Symptoms

The diagnosis of hyperthyroidism is difficult at times, especially when there is no exophthalmos or decided enlargement of the thyroid. These symptoms are of little importance and may be absent in the very severe cases that have a sudden onset. Exophthalmos is present only in a small per cent. of the cases of moderate hyperthyroidism, and not demonstrable in every case of severe toxic goiter. When exophthalmos and thyroid enlargement are absent, the heart and nervous symptoms are often treated without recognizing the underlying cause of the disease. The first symptoms noticed may be slight insomnia, nervousness, accelerated heart action and increased exertion. Often the onset can be traced to an accident, sudden fright, parturition, grief, or great emotional strain.

If the goiter is of the severe, rapidly progressive type, the first acute exacerbation of symptoms may not occur for four to six months, when the patient is forced to her bed for perhaps a month; as the symptoms subside she is able to be up, but cannot do any sort of work. The disease follows a chronic course with the involvement of other organs in addition to the heart and nervous systems.

Plummer states that the onset of symptoms usually occurs in the following order: Cerebral stimulation, vaso-motor disturbances of the skin, tremor, mental irritability, tachycardia, loss of weight, cardiac insufficiency, exophthalmos, diarrhoea, vomiting, mental depression, jaundice and death. Tachycardia is the most common heart lesion. A bruit or thrill over the superior thyroid arteries is practically always demonstrable. Twice as much blood passes through the toxic thyroid as compared with the normal gland.

Kocher states that the blood picture in goiter is characteristic; the coagulation time is accelerated in hyperthyroidism and retarded in hypothyroidism. He gives the average blood count as follows:

	Hyperthyroidism	Hypothyroidism
Leucocytes.....	4300	8800
Neutrophils.....	36.7 per cent	71 per cent
Lymphocytes.....	24.3 " "	58.6 " "

When exophthalmos is present, the following signs can be demonstrated: widening of the palpebral orifice, (Dalyrmyple's sign); lack of convergence, (Moebius' sign); infrequent winking, (Stellwag's sign); subjective feeling of pressure behind the eyebrows (Kocher's sign); failure of the forehead to wrinkle on looking up, (Jaffory's sign); Epiphora may be present if the exophthalmos is very marked.

Influence of Other Lesions on the Symptoms of Goiter.

Barker believes that a focus of irritation or infection is often present in some part of the body aggravating the hyperthyroidism; the most common conditions associated with exophthalmic goiter are chronic tonsillitis, sinusitis, nasal polyps, chronic appendicitis, pulmonary tuberculosis, gall-stones, uro-genital lesions, pyorrhea alveolaris. The association of thyroid and uterine disease is often observed, and has been variously estimated at fifteen to twenty-five per cent. of all cases. It is not uncommon for these patients to observe that their hyperthyroidism is worse when the pelvic lesions are aggravated.

Hertzler states that the physiologic relationship between thyroid and pelvic organs suggests that the latter are particularly liable to be the source of irritation in producing or continuing the symptoms of hyperthyroidism. Relief of the pelvic lesion is occasionally followed by subsidence of the hyperthyroidism.

Hemmeter observes that intestinal disorders rebellious to all forms of treatment often clear up after the goiter is cured. He reports good results following the use of colonic irrigations in the treatment of toxic goiter. If dysmenorrhea is present, it usually improves and often disappears when the hyperthyroidism is cured.

Halsted maintains that the most puzzling cases of exophthalmic goiter are explained by the discovery of the influence of the thymus. The association of the thymus should be thought of in all cases of goiter presenting marked tachycardia and psycho-nuerotic disturbances with lymphocytosis. Thymus involvement is probable in cases presenting dyspnoea, diarrhoea, and slight enlargement of the thyroid with exophthalmos and tachycardia absent.

The predominance of nueresthenic symptoms with low blood pressure and perhaps bronzing of the skin, points strongly to deficiency of the suprarenals. Glycosuria, which is present in eighty-five per cent. of the patients with very severe toxic goiter, is due to overstimulation and inhibition of activity of the pancreas by the excessive amount of suprarenalin in the circulation. The favorable influence exerted by ovarian substance in certain types of hyperthyroidism indicates the close relationship existing between the thyroid and ovary.

PARESIS*

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General paresis is an organic brain disease of an inflammatory and degenerative nature, involving in the main the cortex and the lepto meninges, and manifests itself by certain physical symptoms and a progressive mental deterioration, with certain other mental disturbances. Syphilis is given as the cause of general paralysis, and since the use of the Wassermann reaction it has cleared all doubts as to the cause, as all paretics give 100 per cent. positive results to the Wassermann reaction.

Symptoms. Varied as are the manifestations of this disease, it is not strange that it so often goes unrecognized in the early stages, yet there is no disease in the whole of psychiatry in which there is more danger in not making a correct diagnosis, not only for the sake of the patient but to his family, his friends or, in fact, to any one who, not recognizing his condition may be induced, for instance, to enter into business relations with him. If an early diagnosis is made, much humiliation may be saved the family and the friends of the patient and thousands of dollars to the patient and, in some cases, human lives.

Manifesting itself in the beginning by symptoms of defective intellect, lack of judgement, memory defects and loss of morals, we frequently see once a highly respected citizen, a safe and sane business man, a respected father, an active church worker, a leader in lodges and civic improvements, one who has always occupied an enviable social position in his community, become at the height of his career an "ardent worshiper at the shrine of Venus and Bacchus." Friends and relatives see nothing in this sudden change but the outcropping of the original sin that they knew was in him, and his enemies knew it was his nature and disposition and he was just now being shown up in his true light. His family is distracted by their inability to stay the career of drunkenness and vice which their once highly respected relative has entered. How many heartaches, how many pangs of anguish, how many blushes of shame, how many restless nights could be

* Read before Craig County Medical Society, Feb. 1, 1916.

spared the wife and daughter of such a man had the family physician but recognized the symptoms at the onset and advised the family of the course of the disease. It is for this one reason, gentlemen, that I feel it is more necessary for the family physician to recognize this form of insanity than any other. I have had under my care something like 75 of these patients in the past three years, and the heart-breaking stories that have been told me by the wives and mothers of these patients make me want to impress on the minds of the profession the necessity of making an early diagnosis of these cases. A maniacal outbreak, the delirium of an acute toxic psychosis, or the slow developing depression of the melancholias or the gradual changes of the paranoiac are usually diagnosed before any harm can come; but here we have a disease, attacking one at the very height of his physical and mental powers, insidious in its onset, yet so changing the character of the patient in a few weeks that the once honest, upright, moral, truthful, home-loving, christian citizen becomes the prey of any form of vice, sinks to the depths of drunkenness and debauchery and may even stain his hands with human blood. This is not the worst. All of this would finally be explained in the light of the diagnosis and be excused, but it so happens that such a man as described above handles the funds of the family, and he invariably wastes most of his money and property in debauchery, becomes the prey of sharks and "get-rich-quick" schemers, who only too well appreciate his poor judgment, and when the time comes to send him to an institution and his affairs are checked up, the mother and the children find they have nothing left and are thrown upon their own resources. The pity of it all is that it could have been prevented.

The diagnosis of paresis does not rest solely upon the mental symptoms. There is a mistaken idea that all cases show delusions of grandeur, delusions of great power, great wealth and strength. In fact, many cases are depressed and never present any of these symptoms; about half of our cases are of the depressed class. The disease is divided into four types, namely: the demented type, of which the name indicates; the excited type, in which the mental symptoms are more active and in which all have the idea of grandeur, strength, wealth, etc. The agitated type or galloping paresis, and this is only a more aggravated form of the excited type. In this type the mental symptoms are very active, insomnia is severe and emaciation is rapid. The depressed type, which is often mistaken for melancholia.

In taking up the general symptoms we will divide the diseases into first, second and third periods and take them up one period at a time.

First Period. Physical symptoms. Of these by far the most important are the oculo-motor and tendon reflex disturbances. Of the oculo-motor the pupillary disturbances are most important—the loss of the light reflex with retentions of the reaction to accommodation—"the Argyll-Robertson pupil"—is the most valuable sign of beginning paresis. Of the tendon reflexes the knee jerk is of most importance. This may be normal in a few cases, exaggerated, diminished or lost on one or both sides. The exaggerated reflex is most common but we often find it absent on both sides. We also have a general muscular weakness of different parts of the body or a certain group of muscles, marked tremor and emaciation. The parietic speech is so characteristic that when once heard it is always remembered, but is very hard to describe. It resembles the speech of a drunken man or one whose tongue is thick. The jerky tremor of the speech muscles is responsible for this peculiar speech. This speech is better shown when the patient tries to pronounce such words as "electricity, artillery, rural country," etc. As the disease progresses the words run together more and more until finally the speech is almost incomprehensible. The handwriting of the patient is of equal importance, lapse of words, repetition of words and even sentences or reduplication of letters and syllables is significant.

Mental Symptoms of First Period. The mental symptoms may extend over several months and are not always recognized until some rash act is committed

and the family begins to recall all the absurd things the patient has done during the past few months. I enumerated in my opening many of the symptoms of the beginning of the disease—failure of memory, weakness of judgment, loss of sense of time and place, moral weakness, delusion of grandeur or general depression, hallucinations and illusions, emotional inability, lack of application to usual work, disregard for the use of money and carelessness about his personal appearance.

Second Period. Physical symptoms, the symptoms already described, become more marked, the tremor is more evident, the muscular weakness is very noticeable and at this stage the patient may take on quite a bit of flesh. The Romberg sign becomes marked at this stage and the walk is more ataxic. In a great number of these cases we have the paretic seizures, which may be epileptiform or apoplectiform. In the first they may be very light and resemble very much true epilepsy, but if the patient is noticed very closely it will be seen that consciousness is not entirely lost. These seizures are often the first symptom to attract the attention of the relatives of the patient and are often diagnosed epilepsy and it should be kept in mind that seizures coming after thirty to forty years of age without previous history of epilepsy or alcoholism should at once suggest paresis.

The apoplectiform seizures resemble in every way true apoplexy, but the resulting paralysis is not often permanent—in fact, it generally disappears in two or three days. The mental symptoms are also more exaggerated during this period, dementia is more pronounced, memory fails entirely, the speech disturbance is very marked, the writing defects are greater. Their ideas of grandeur increases or in the depressed type they become more depressed; in fact, all symptoms of the first period show exaggerations in every way.

Third Period. We generally date the third period from the time the patient begins to soil himself, and this is when the paretic begins to be a great burden to those who care for him. All of the physical symptoms are increased and the patient can hardly talk, cannot write, has marked muscular twitchings all over the body, locomotion becomes dangerous and as the bones are so friable at this time it is dangerous for the patient to be out of bed. In this enfeebled condition the patient becomes bed-ridden, contractures of the lower extremities often develop, also a contracture of the neck muscles develop, so that the head is raised from the pillow, the control of the sphincters is lost, paretic seizures become more often, bed sores develop and often the patient will grind his teeth together for hours. All this presents a picture that when once seen will never be forgotten. The mental symptoms progress along with the physical symptoms as above described, dementia is profound, the patient does not even know his name, he ceases to lead a mental life and leads only a vegetative existence. Finally, if no intercurrent malady supercedes, the patient sinks into coma and dies.

THE TREATMENT OF BURNS*

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In this paper I shall endeavor to summarize a few facts winnowed by experience, and to call attention to other teachings transmitted by text and tradition, that it has been necessary to unlearn in the search for the ideal. First let us consider the treatment of burns in general. These are:

(1) **To Support the Patient:** This is a necessity in the severer cases, and a desideratum in the mildest. The fact that a burn is trivial is no excuse for permitting the patient to spend a sleepless night and a haggard and hollow-eyed day after. Under this head are indicated the judicious use of narcotics, attention to the diet and the emunctories, and the avoidance of such measures as may cause unnecessary pain or trauma. These considerations have driven me from the use of the stronger germicides, and have taught me to use with caution some of the

milder antiseptics, such as aluminum acetate. I have never seen any good reason for the use of picric acid. Although in selected cases the open air treatment has good results, we frequently find that the exposure of the denuded area is nothing short of torture. In first degree burns the inflamed epidermis, and in those of the second degree the exposed and exquisitely sensitive nerve endings, usually demand that we avoid undue exposure and that we make all applications as soothing as possible.

(2) **To Cleanse the Wound;** This includes the removal of dead tissue, and the snipping away of sloughs as fast as they separate, and also the removal of pus and exudate that is, or may become, irritating or a bacterial medium. We must often have recourse to irrigation, and it is well to avoid the stronger solutions, especially bichloride of mercury. It is well to remember that a solution which is truly germicidal is also capable of killing or seriously depressing the precious tissues whose growth we are endeavoring to promote. On the other hand, if the dilution is such as to be harmless to the body cells, its use, as opposed to a bland irrigating fluid, is without the basis of reason.

(3) **To Promote Repair:** Logically this indication includes the second, as we must often depend on nature for the restoration, limiting our efforts to affording her the best facilities and the most favorable environment possible. However there are limits to the reparative process of nature. The growth of the new cuticle progresses at the rate of about one-eighth of an inch a week, so that it requires a month for the epidermization of an area one inch in diameter. For the reason that the subsequent growth is increasingly slow, and soon *nil*, it is good practice to resort to active measures when the diameter of the denuded area is one inch or more.†

The principles of treatment which have proven to be most effectual in my hands are as follows:

(1) **Burns of the First Degree,** or where there is reddening and superficial inflammation, without actual destruction.

All that is necessary here is some emollient, such as cold cream, vaseline, or olive oil. To be avoided are antiseptics, or salves containing irritating ingredients.

(2) **Burns of the Second Degree,** or where only the superficial layer of the skin has been destroyed.

There is always in these burns some vesiculation. These vesicles should be punctured aseptically. The subsequent disposition of this separated epidermis depends on whether or not the wound remains fairly dry. If so, the dead skin may be left for a protective covering until it is no longer needed, but it must be removed in its entirety in the event it tends to retain secretions.

On account of the sensitiveness of the exposed *cutis vera* it is practically always necessary to apply a protective dressing to a second degree burn. For ambulatory dressings I have virtually abandoned all others for vaseline, plain, or with one drachm of boric acid to the ounce, or gutta percha strips applied to the surface of wound. Next come several layers of gauze, and outside this absorbent cotton, secured with a bandage or adhesive. If the patient is in bed the same plan may be pursued, or a wet dressing may be substituted, or applied over the gutta percha. For such wet dressings nothing else is so good, as a rule, as normal saline solution, or Locke's solution. If a mild antiseptic effect is desired, a saturated or half saturated boric acid solution may be used. But it is well to remember that boric acid is not altogether free from toxicity and that it sometimes produces a dermatitis; also that the most efficient wound antiseptic is that of the body cells and their secretions, and one that is usually sufficient for the work in hand, provided we do our part in seeing that this autonomous mechanism is not overtaxed.

The wound must be cleansed often enough to keep it free from contaminating secretions, but not so often as to unnecessarily disturb the reproduction of the

†Foote: Minor Surgery; 1907, D. Appleton & Co.; p. 29.

delicate epithelial cells. For the purpose of irrigation most highly to be recommended is normal salt solution, which, if we except Locke's solution, is the nearest approach we can make to the medium in which the cells are reproduced and grow. If one feels that he must employ an antiseptic solution, he can satisfy his conscience by the use of boric acid. It is permissible to use hydrogen peroxide, in full strength or diluted with from one to three parts of water, for the purpose of removing closely adherent or inspissated secretions.

(3) **Burns of the Third Degree**, or where the entire thickness of the skin is destroyed:

In such accidents there is no reproduction of the epithelial cells from the depth, except insofar as isolated islands of cutis may remain, but proliferation must take place from the skin margins. If the hiatus exceeds more than one inch in diameter, we must be prepared to assist Nature by more active participation. We are in a position to do this only after the denuded area has cleaned up and is the seat of healthy granulations, and it is for this eventuality we must wait, rather than for any arbitrary time limit. We have at our disposal several courses for hastening the process of repair.

(a) When the raw area is small, we can often materially hasten the proliferation by the application of scarlet red to the edges of the epithelial border of the ulcer. To avoid toxic symptoms the commercial salve should be mixed with an equal volume of vaseline, giving a strength of 4 per cent. and applied once in 24 hours.

(b) In regions where the subcutaneous tissue is loose in structure the gap between the skin margins may be narrowed by the tension of strips of adhesive adjusted over a small protective dressing. Sometimes an almost incredible amount of covering may be gained in this way, and we have the satisfaction of knowing that it is of the best quality of skin that the patient is able to produce.‡

(c) We are now and again reduced to the necessity of repairing the defect by some plastic operative procedure. Indeed it is well to recognize early the limitations of natural repair, as indicated above, and to avoid waiting for impossibilities. The plastic flap and the various forms of skin grafting has each its peculiar place, but, in my experience, none is more universally applicable than the much maligned and much neglected Reverdin graft. Since reading the contribution of Cotton & Ehrenfried** and the adoption of their methods, I am convinced that most of the failures with the Reverdin graft are due to technic and not to principles.

In addition to giving a large proportion of successful results in properly selected cases, grafting by this method recommends itself by its simplicity and its wide range of availability. The grafts are taken from the patient. After the area to be utilized has been shaved and disinfected, it is anaesthetized with cocain or novocain. The grafts are secured by elevating a small area of skin with the point of a cambric needle and shaving it off with a sharp scalpel or razor. In size the graft should approximate one-fourth inch in diameter and should be taken only deep enough to cause a slight ooze of blood to show at the bottom of the resulting wound. These small flakes of epithelium are placed about one-fourth inch apart on the granulating surface of the denuded area. The surface to be grafted should be clean and the granulations normal. Otherwise no preliminary preparation is required. After the grafts have been sown over the entire surface they are allowed to dry in the air for a few minutes in order that they may become firmly fixed by the drying of the serum. Then a dressing of fenestrated gauze wrung from normal saline is applied, and over this dressing is snugly bound gauze and absorbent cotton. Unless there is pain or much secretion the first dressing is not removed until the eighth day, and the second dressing is similar in nature and remains for a like time.

‡In this connection see contribution by Chas. A. Parker to the Journal of the American Medical Association, July 3, 1915. P 16.

**Boston Medical and Surgical Journal, Dec. 23, 1909.

THE EPIDEMIOLOGY OF PNEUMONIA

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Pneumonia—An acute infectious disease, characterized anatomically by primary fibrinous inflammation of the lungs, and toxemia of varying intensity, though usually profound. There is fever which terminates abruptly by crisis. Secondary infective processes are common.

The cause of acute croupous or lobar pneumonia is a specific organism, the pneumococcus. The bacteriology of the causal organism of the disease will not be considered in this paper.

That the pneumococcus is present in the saliva of normal mouths has long been recognized, and despite this fact it is very difficult to prove direct infection from person to person. Nevertheless, hospital practice offers sufficient evidence that persons suffering from pneumococcal pneumonia or its suppurative complications may be the sources of contagion and infection in the other patients. It is usually assumed that pneumonia is an infection of the lungs necessarily by way of the air passages, but it is possible that infection of the blood can take place by way of the alimentary canal, the genital passages, or the skin, and that pneumonia may develop sometimes as an infection of the lungs from the blood.

Predisposing influences may so reduce the normal resistance of the individual as to favor auto-infection from his own mouth or nose cavity by the germ that had hitherto existed there as a harmless commensal species. Filth, overcrowding, insufficient ventilation, and a low state of hygiene and sanitation in living places are potent factors in the causation of pneumonia—in fact, any influence which depresses the general vitality, and among these may be mentioned exposure to wet and cold, fatigue, poverty and mental trouble, and exhaustion from other diseases, are predisposing factors. Neglected oral hygiene is a contributory element to the disease. Alcohol is also regarded as a predisposing influence of no mean consequence.

One of the chief predisposing elements is either unaccustomed or excessive exertion, which may give rise to an enfeeblement of the entire muscular system, and, in connection with this, to an increased function of the sweat glands. This explains, for illustration, the high incidence of the disease among newly enlisted military recruits. Unless it is conceded that individual overexertion is a potent predisposing factor, it is difficult to explain why the proportion of illness among recruits to seasoned soldiers should not at least be the same.

Extensive epidemics of pneumonia, usually of quite a malignant character, have been repeatedly observed in single buildings, especially in barracks or prisons, as well as in tenement houses and other localities. Defective house drainage seems to be a predisposing cause of pneumonia in some cases. A careful inspection of local sanitary conditions is essential where more than two cases occur in the same house.

When a number of cases occur simultaneously or in rapid succession in isolated localities, the outbreak beginning with almost explosive violence, as is sometimes the case, it is reasonable to assume a common depressing influence that predisposes numbers of persons to infection from a common source; these individuals then in turn serve as sources for the further spread of the disease. As the pneumonic patient is the source from which the most highly pathogenic varieties of the causative organism are obtained, it is clear that an individual predisposed by one debilitating influence or another, when intimately associated with the patient, would present conditions eminently favorable to direct infection. The fact that the disease is not commonly regarded as transmissible explains the indifference on the part of many to precautions against infection, and it is probably through such laxity that the disease is at times contracted.

It is debatable how far trauma may influence an attack of pneumonia. When the chest has received a severe blow without fracture of the ribs, and then pneu-

monia begins within a day or two beneath the part injured, it is hard to believe and impossible to swear that there is no causal relation between the two events. The point is not unimportant in personal injury litigation.

No other disease recurs in the same individual with such frequency as pneumonia. Pneumococcal pneumonia does not confer a prolonged immunity after recovery; relapses are, therefore, not uncommon. From 10 to 30 per cent. of patients give a history of previous attack. Cases are recorded in which the attacks have been most numerous. That there are instances of a natural or inherited susceptibility, greater than the average, cannot be doubted. It is claimed that one attack makes the patient more susceptible to a second attack at any future date. In the case of a micro-organism so universally present as the pneumococcus, conditions such as alcoholism, diabetes, and other general diseases and intoxications, all of which minimize the combative powers of the tissues, predispose to pneumonia.

Whilst pneumonia germs have been found in the air, the disease must not be recognized as air borne.

Persons of all ages are liable to the disease, but no age seems especially susceptible to it. The age incidence of pneumonia corresponds roughly to the relative numbers of persons living at different ages. A possible exception is childhood; but here the diagnosis between lobar and lobular pneumonia may be sufficiently difficult to make statistics unreliable. It is particularly to be mentioned that in children pneumonia does not occur as rarely within the first year of life as is often supposed. It may be safely stated that the morbidity in males is the same at any age between the tenth and sixtieth years of life; that the morbidity is very high after the sixtieth year in males, and that the latter contract pneumonia between the tenth and thirtieth years of life three times as frequently as do females in the corresponding age. In the aged and very young the disease is invariably fatal.

Whether sex has any influence upon the frequency of pneumonia has not yet been established with certainty. The less frequent occurrence of the disease in women may depend upon the fact that, on account of their vocation, they are not as frequently exposed to heavy exertion in unfavorable weather as the men. This view finds support in the fact that wherever women perform the same work as men the frequency of the disease is equal in both sexes. If it were true that sex did have any influence upon the frequency of the disease, it would have to be assumed that there was a predominant morbidity in the male sex. However, this cannot be proved as long as the relative percentage to the morbidity of both sexes is not determined. The more frequent occurrence of pulmonary inflammation in men is, therefore, due to occupation. The preference of pneumonia for a particular sex could be shown with more certainty if difference in children were observed.

All races suffer from pneumonia, but the negro appears to be the most susceptible individual. The congenital or acquired predisposition in the colored races, and especially in the negro race, may be explained by the wretched hygienic conditions under which they live, or the notorious indifference with which they expose themselves to the elements. It is only when the negro is out of his biologic zone that the disease is more fatal to him than his white brother. Sight must not be lost of the fact that the nostrils of the negro are very flat, wide and open, and the flooding of the nasal chambers with volumes of cold air irritates the lining membranes and thus facilitates the entrance of infection by way of the respiratory tract.

While it is evident that climate is a minor factor in the incidence of pneumonia, it appears that racial or national conditions have a marked influence upon the frequency of the disease. Individuals migrating from northern latitudes to sub-tropical or equatorial regions seem to enjoy a relative immunity from pneumonia; on the other hand, the inhabitants of the tropics are particularly subject to the disease after locating in colder regions.

The fact that pneumonia is not as frequent among the better situated classes may be explained by the possibility of better preventive measures and more resourceful auxiliary agencies, thus the consequences of fatigue and bodily exertion, as well as the damage done by exposure to the elements, and particularly the influence of rain, causing cooling of the surface of the body, are more successfully combatted.

The disease is most common in cities. Pneumonia is more common in indoor workers than in those who follow outdoor occupations. It is the belief of a few epidemiologists that sailors at sea seldom contract pneumonia, but this in the writer's opinion is questionable. If indoor workers contracted pneumonia more than outdoor workers why the disparity between the sexes. Then again, women working in the open contract the disease more frequently than other women. The question as to relative incidence of the disease between indoor and outdoor workers is, indeed, a moot one. The fact that women contract the disease less than men seems to contradict the assumption that an indoor life is of particular significance in the prevalence of pneumonia. If this were the case, more women would contract the disease than men.

If, however, the great pneumonia mortality in prisons is to be taken as a proof for the frequent affliction of people who are confined indoors, then the error lies in the consideration in the forms of pneumonia which have absolutely nothing in common with genuine lobar pneumonia. Most of the pneumonias occurring in prisons and mining settlements are of the so-called infectious variety, which should be classified among the atypical pneumonias.

* Pneumonia has never been observed as very prevalent during the summer months. About 15 per cent. of the cases occur in the summer quarter and about the same number in the autumn; the proportion is doubled in the winter months, and undergoes a further slight increase to about 35 per cent. in the early spring months. The seasonal incidence is almost similar to that of bronchitis and broncho-pneumonia. The climatic conditions which seem to be of importance are sudden changes of temperature, cold winds and dampness; and these are the conditions which are likely to produce sudden chilling of the surface of the body.

Epidemics occurring at unusual seasons have often been associated with some unusual meteorological conditions of the same kind. The influence of changes in temperature which has been looked upon as etiologically significant has also been proven experimentally. It has also been proved experimentally. It has been demonstrated that animals which after an injection of pneumonic sputum into the trachea have remained well, were affected by pneumonia if they were subjected to the influence of cold before these injections were made.

It is worthy of note that after a thorough wetting pneumonia not rarely follows. This special injury at any season offsets the unfavorable influences of the weather during the winter, through which a large number of persons are predisposed to pneumonia.

The pneumococcus is, however, more frequently found and is more virulent in winter. For weeks and weeks the organism is easily recoverable from convalecents and is more virulent than those obtained from normal mouths. On account of the wide distribution of the pneumococcus in healthy human mouths and the opportunities for the direct transference of fresh secretions so numerous it is probably of no importance whether this organism is long-lived or not. Pneumococci a week old have been recovered from handkerchiefs, despite its being recognized as a feeble organism.

Living in localities exposed to severe winds or great drafts is not without influence in the production of pneumonia. Among the laity the view is prevalent that small children should not be carried in the open air during the prevalence of easterly winds. This view has no warrant.

The influence of the barometer may therefore also be regarded as unproved in pneumonia.

Soil appears to have no influence on pneumonia prevalence.

Altitude exerts no influence on the incidence of pneumonia.

Pneumonia has been found to exist in every geographic division of all four continents. However, there are marked differences in the frequency of pneumonia in different countries—and up to the present day the influences bringing about these variations remain undetermined. Pneumonia can and, as said earlier, does exist in all latitudes and is as common in the temperate climes or cold regions as in the tropical belts. Nearness to or remoteness from the equator has no effect on its prevalence. Rapid and frequent changes in temperature, to a slight degree, governs its distribution.

The mortality of pneumonia is due to a great number of causes. One cause is certainly predominant which is not dependent upon locality, upon season, or upon the individual. But its presence cannot be determined because the three chief conditions which have just been named are not sufficient to explain a fact that is undeniably true, and is demonstrable by an analysis of the causes of mortality. This fact is that the mortality of pneumonia varies greatly in different years. In one and the same city, in one and the same hospital or district, in persons who in the main do not show the slightest difference in their living conditions in the course of years, when the pneumonia is treated by one and the same physician in the same manner, the mortality may in the course of these years be an astonishingly unequal one.

Under such circumstances as recited above nothing remains except to accept the conclusion that the variation in mortality is attributable to the differences in the pathogenicity of the pneumococcus. Such an assumption can receive complete confirmation only by a positive examination of a periodic difference in the virulence of every special kind of pathogenic bacteria. Of great importance next to this in influencing the mortality is age. In reference to this there exists many statistical reports, but many of them are worthless. Great influence upon the mortality of pneumonia is ascribed to the sex of the patient. This influence is decidedly doubtful.



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DR. CLAUDE A. THOMPSON, EDITOR-IN-CHIEF

ENTERED AT THE POSTOFFICE AT MUSKOGEE, OKLAHOMA AS SECOND CLASS MAIL MATTER, JULY 26, 1912

THIS IS THE OFFICIAL JOURNAL OF THE OKLAHOMA STATE MEDICAL ASSOCIATION. ALL COMMUNICATIONS SHOULD BE ADDRESSED TO THE JOURNAL OF THE OKLAHOMA STATE MEDICAL ASSOCIATION, BARNES BUILDING, MUSKOGEE, OKLAHOMA.

The editorial department is not responsible for the opinions expressed in the original articles of contributors.

Reprints of original articles will be supplied at actual cost, provided request for them is attached to manuscript or made in sufficient time before publication.

Articles sent this Journal for publication and all those read at the annual meetings of the State Association are the sole property of this Journal. The Journal relies on each individual contributor's strict adherence to this well-known rule of medical journalism. In the event an article sent this Journal for publication is published before appearance in the Journal, the manuscript will be returned to the writer.

Failure to receive the Journal should call for immediate notification of the editor, 507 Barnes Building, Muskogee, Okla.

Local news of possible interest to the medical profession, notes on removals, changes in address, deaths and weddings will be gratefully received.

Advertising of articles, drugs or compounds not approved by the Council on Pharmacy of the A. M. A. will not be accepted.

Advertising rates will be supplied on application. It is suggested that wherever possible members of the State Association should patronize our advertisers in preference to others as a matter of fair reciprocity.

EDITORIAL

SOME OKLAHOMA OSTEOPATHS WHO PRACTICE MEDICINE OR PROPOSE TO DO SO.

For the information of the profession generally we append a list of Osteopaths who have registered with Hubert L. Bolen, Collector of Internal Revenue, for the purpose of securing narcotic drugs under the Federal Law.

The Commissioner of Internal Revenue does not attempt to say that registration entitles these gentlemen to use such drugs, but has ruled that those legally licensed may be registered. In this connection it should not be forgotten that he will also license one to sell alcohol, beer, whiskey, etc., yet if you sell it in that part of Oklahoma originally known as Oklahoma Territory you violate a state law, while if you sell it in that part formerly Indian Territory you violate both Federal and State laws.

Our law permits osteopaths to use drugs "in emergency;" so does it permit householders to use them in that manner, midwives to perform their services likewise, but it evidently contemplates that those who use drugs for pay, as a profession or calling, shall qualify in like manner as is required of general practitioners and no amount of technical hair-splitting should evade that issue.

TREASURY DEPARTMENT

Oklahoma, Okla., February 21, 1916.

Dr. C. A. Thompson, Muskogee, Oklahoma.

My Dear Sir: Your letter of the 17th inst. received. In reply will say that it is not the custom to keep the list of Osteopaths and Physicians separated, but for our own convenience I have tried to keep the Osteopaths in a separate file. Our record is open to the public at any time for inspection.

The following Osteopaths are registered under the Harrison Act:

W. D. Ownby, Broken Arrow, Oklahoma.

J. E. and Gertrude Francis, Tulsa, Oklahoma, 406 Bliss Bldg.

E. L. Shaw, Vinita

W. S. Corbin, Chickasha
P. T. Corbin, Anadarko
A. K. S. Calvert, Ponca City
Ray L. Davis, Guthrie
F. C. Davis, Tonkawa
C. E. Hedgpeth, Sayre
M. E. Miller, Mangum
James K. McPike, Okmulgee
William F. Nay, Enid
H. C. Wallace, Blackwell
H. C. Montague, Muskogee

Respectfully,
H. L. Bolen, Collector.

OUR ANNUAL MEETINGS

Many of our annual meetings of the past have had their power for good seriously curtailed by the introduction of matter in the House of Delegates and the Council that might have been very readily disposed of with the minimum loss of time had the authors prepared their subject for introduction before the meeting. Theoretically, the business of the Association is transacted by these two bodies and no doubt a great deal of it could be handled by correspondence directly to the Council in advance of the meeting, thus saving the time of men who attend what was intended by its organizers to be a scientific meeting and not one for the consideration of business, which is supposed to be handled by the county society.

The House of Delegates, in proportion to the usual attendance, is often so large that hardly any section may carry on its work with the attendance it should have when the house is in session, and the very object of sections and section work is defeated. Another matter, too, that should have more attention is that of committee work and reports by the various committees having to do with their respective subjects. The Association is getting too large, its problems too great and important to be disposed of in a meeting of two or more days, hence the increased importance of the committees who should have their reports in hand completely prepared in order to further facilitate the work of the meeting.

The May meeting of the Association should be the greatest in our history, as the city is centrally located, has a large membership immediately about it and is popular as a meeting place. We should bend every effort in advance of this meeting to leave nothing undone that, neglected, might clog the affair.

THE KANSAS ANTI-FEE-SPLITTING LAW

For the information of those who may be interested in knowing how some states have begun to regard the matter of selling patients, we print below an act recently passed by the Kansas Legislature, which is now the law of that state. In passing, it is not out of place to observe that it is said there are other states that need such a law.

Be it enacted by the Legislature of the State of Kansas:

Sec. 1.—It shall be unlawful for any physician or surgeon to pay or offer to pay any other physician or surgeon or to any person in his behalf, either directly or indirectly, any fee, money or thing of value of any kind in consideration of such other physician's or surgeon's bringing to him, or agreeing or promising to bring to him, for treatment, any patient, assisting to treat or operate upon any such patient so sent, or advising or agreeing, promising or proposing to advise any patient to consult him, or assisting to treat or operate upon any patient so advised; and it shall be unlawful for any physician or surgeon who shall have sent or shall propose to send to another physician or surgeon any patient, or who shall have

advised or promised or proposed to advise any patient or patients to go or to consult such other physician or surgeon, to demand, collect or receive any fee, money or thing of value of any kind, either directly or indirectly, therefor, or for assisting to treat or operate upon any patient so sent or advised; provided, however, that it shall not be unlawful for such physicians or surgeons to pay or receive such fee, money or value where full disclosure as to the amount to be paid and received shall have been made to the patient or person liable for the fees to be charged for the treatment of such patient before such patient or person shall have paid or agreed upon the amount of the fees to be paid by them.

Sec. 2—Any person who shall violate any of the provisions of this act shall be deemed guilty of a misdemeanor and upon conviction shall be punished by a fine of not more than \$500 and by imprisonment in the county jail for not exceeding six months, or both, and such conviction shall operate as an annulment of the license of such convicted person to practice as a physician and surgeon in this State.

Sec. 3—It shall be unlawful for any person, firm or corporation, owning, operating or controlling any hospital in this State, to pay directly or indirectly to any physician or surgeon any commission or consideration of any kind whatever for advising any patient to go to such hospital for treatment or operation or for bringing any patient to such hospital for such purpose.

Sec. 4—It shall be unlawful for any physician, surgeon or hospital to demand or collect any fees or charges from any patient in any case in which there shall have been a violation of this act.

Sec. 5—All acts and parts of acts in conflict herewith are hereby repealed.

Sec. 6—This act shall take effect and be in force from and after its publication in the statute book.—*Journal of the Kansas Medical Society.*

PERSONAL AND GENERAL NEWS

Dr. J. M. Niewig has moved from Comanche to Duncan.

Dr. M. C. Comer has moved from Arapahoe to Weatherford.

Dr. Fred Harrison, Stonewall, is doing special work in New Orleans.

Dr. B. J. Davis, formerly of Humphreys, has located in Sand Springs.

Dr. F. L. Carson, Shawnee, has returned from the New Orleans clinics.

Dr. Oliver Bagby, Vinita, recently underwent an operation in St. Louis.

Dr. C. R. McDonald, Broken Bow, is doing special work in New Orleans.

Garfield County Medical Society held a tuberculosis meeting March 3, in Enid.

Dr. A. L. Wagoner, Hobart, has been named County Registrar for Kiowa County.

Dr. L. A. Hahn, Guthrie, had his surgical case lifted from his car recently by a thief.

Dr. J. W. Sosbe, Webbers Falls, who has been ill for some time, spent a part of February and March in Hot Springs.

Dr. J. Wade Bone, City Physician of Sapulpa, has been seriously ill and was recently operated upon in the Tulsa Hospital.

Dr. M. H. Edens, Verden, accompanied by his wife and daughter, has gone to New Orleans, where he will do post-graduate work.

Dr. C. E. Putman, Eakley, will study in post-graduate schools for three months, after which he will seek another location in Oklahoma.

Dr. J. M. Cooper, Enid, has sold out and will spend the summer in the East doing post-graduate work, after which, it is said, he will locate in Oklahoma City.

Dr. J. H. Florence, Houston, Texas, has been appointed Fraternal Delegate to represent the Texas Association at the May meeting of the Oklahoma Association.

Dr. C. L. Orr of Roff is visiting the New Orleans Clinics.

Dr. O. F. Harper of Hinton has moved to Oklahoma City.

Dr. C. E. McVey, Cyril, is doing postgraduate work in St. Louis.

Dr. W. L. Kendall, Enid, is doing post-graduate work in Chicago.

Dr. Raymond H. Fox, Altus, is doing special work in Kansas City.

Dr. F. M. Sanger, Oklahoma City, is doing special work in Chicago.

Dr. S. C. Davis, Weatherford, is doing postgraduate work in New York.

Dr. E. S. Crowe of Olustee was recently operated for appendicitis in Altus.

Dr. N. H. Lindsey, Pauls Valley, is attending the Chicago and Mayo Clinics.

Dr. A. B. Cullum, Hennessey, it is reported, will soon move to Beloit, Kansas.

Dr. L. M. Doss, Oklahoma City, has been appointed a member of the State Board of Dental Examiners.

Dr. L. F. Watson, Oklahoma City, has established a sanitarium for the medical treatment for goiter and diseases of the ductless glands.

Drs. Frank McGregor and Fowler Border of Mangum have formed a partnership and will hereafter jointly conduct the Border Hospital.

Dr. R. V. Smith, Secretary of the Oklahoma State Board of Examiners, announces the next meeting for April 11th at the Lee Huekins Hotel, Oklahoma City.

Dr. L. W. Cotton, Enid, Superintendent of Health for Garfield County, has issued a general clean-up order for the entire County. The object is to at once dispose of all garbage and unsanitary conditions.

Oklahoma City is contemplating the enactment of ordinances complying with provisions of Federal and State laws, in order that direct action may be had in the prosecution of violations of the narcotic laws.

Dr. J. C. Johnston, McAlester, has the deep sympathy of his professional brothers on the loss of his little girl, February 10th. Dr. Johnston lost his wife in December and this latter affliction falls as a double blow.

Dr. H. E. Williams, formerly of McAlester, is now located in Kerrville, Texas. Dr. Williams is an enthusiast over the climatic conditions in the hills of Southwest Texas for tuberculous people and is specializing in that work.

Drs. L. Haynes Buxton and Austin L. Guthrie have formed a partnership for eye, ear, nose and throat work in Oklahoma City. Dr. Guthrie is a new man to Oklahoma and comes from Cincinnati, Ohio, with a very high reputation.

The Journal is in receipt of a newly invented hypodermic syringe by Dr. D. D. Howell, Nowata. It is a neat, compact, all metal affair with six tubes for drugs, three needles, etc., yet occupies very little more space than a thermometer case or pencil.

The next A. M. A. Directory will show that there are listed as legal practitioners in Oklahoma approximately 2624. Of this number a great many are ineligible for membership in the Oklahoma Association, however the membership for 1915 was 1452.

R. V. Smith, Tulsa, secretary of the State Board of Medical Examiners, spent several weeks in the Chicago clinics. He represented the State Board in the meeting of the Federation of State Boards and in the A. M. A. Council on Medical Education.

Dr. Robt. L. Hull, Chairman of the Committee on Arrangements for the Oklahoma City meeting, May 9-10-11, announces that the Maywood High School building, formerly occupied as executive offices, will be used for all sections, registration and exhibits for the meeting.

L. B. Shaver, representing W. B. Saunders Co., Philadelphia, won first prize in October, 1915, and first prize in January, 1916, over 32 contestants in the United States. Shaver says that Oklahoma physicians are buyers and readers of good books, that his sales stand higher than those of any salesman and were made in Oklahoma.

Medical men who play golf and are members of the A. M. A. will be provided with an opportunity to enter tournament hereafter at the annual meetings. A permanent organization of the American Medical Golfing Association has been organized. All members are eligible. Dr. Will Walter, 122 S. Michigan Blvd., is secretary.

Dr. J. A. Ryan, one of the old guard in Oklahoma and Indian Territory medical profession and a man who for years stood at the head of his profession, entertained many of his colleagues at a farewell dinner March 11th at his home in Oklahoma City. Dr. Ryan came to Indian Territory in 1877 and entered Oklahoma City on the first train that ran to that point. His life has been lived successfully and creditably to himself, his profession and the citizenship of this state.

Oklahoma City physicians' wives whose husbands are attached to Wesley Hospital Staff recently organized a Wesley Welfare Club. The officers are: President, Dr. Winnie Sanger; Vice-Pres., Mrs. J. W. Edwards; Secretary, Mrs. C. W. Townsend; Treasurer, Mrs. Floyd Bolend; Executive Board, Mmes. F. K. Camp, M. M. Roland and C. E. Barker.

"Dr." Gorbey, a Chiropractic of Oklahoma City, has been made the defendant in a peculiar action. The plaintiff in the case alleges that through his malpractice she lost her husband, and has therefore gone into court asking that he be restrained from further "practicing." There would appear to be some justification for applying the same rule to all that cult.

Dr. Henry B. Favill, Chicago, a great man in the American medical profession, died from pneumonia in Springfield, Mass., February 20. Dr. Favill's greatness is testified to in the many achievements to his credit, not only as a progressive physician, but in his many works as a public spirited, constructive man. His work in all civic lines has perhaps never been equalled by any physician in this country and no move of importance in Chicago passed without his intelligent and kindly advice. He was known as a genial, strong, educated, upstanding man, whose absence will be strongly felt in his home and by those familiar with his work.

Drs. D. M. Randall and A. W. Everly, Muskogee, have just answered the "call of the wild" in the district court of Muskogee County. They were asked to pay \$20,000 because a boy died under an anesthetic. The court promptly sustained a demurrer to the evidence and ordered a verdict for the defendants. The court could not do what a great many men believe ought to be done, reimburse these two physicians for their time and expense in defending themselves against attack. The attorneys fees alone in this case, not counting the cost which fell on the plaintiff, would pay the medical defense cost several times over in the largest county in Oklahoma.

Dr. William L. Rodman, President of the A. M. A., died in Philadelphia, March 8th, from pneumonia. Dr. Rodman was fifty-seven years of age at the time of his death, which came as a distinct shock to many of us in the Southwest who knew him personally and only lately had the pleasure of hearing him. Aside from the many eminent qualifications to which he had attained, the enviable and great position he occupied in surgery and constructive medicine to make him one of the idols of the profession, physicians in the Southwest felt a keen personal interest in his achievements, for during his young manhood he was a medical officer stationed at Ft. Sill, in Indian Territory, and later in private practice in Abilene, Texas. This fact has always drawn physicians of the Southwest to him. His extremely pleasing personality and force of character tied his friends to him.

COUNTY SOCIETIES.

Latimer County Medical Society elected officers for 1916 as follows: President, I. C. Talley, Red Oak; vice-president, Garnett A. Kilpatrick; secretary-treasurer, E. B. Hamilton; censor, J. A. Munn; delegate, J. F. McArthur; alternate, Garnett A. Kilpatrick, Wilburton.

McClain County elected: President, C. B. Smith, Washington; vice-president, J. H. West, Purcell; secretary-treasurer, O. O. Dawson, Wayne; censor, T. C. McCurdy, Purcell; delegate, O. O. Dawson, Wayne; alternate, W. C. McCurdy, Purcell.

The Pittsburg County Medical Society has decided to place all its claims in the hands of one collection agency and have notified the public that he is under bond and authorized to transact business for them. This is one of the best systems there is if it is followed out.

The Marshall County Medical Society met recently and elected the following officers: Dr. G. H. Funk, Madill, president; Dr. A. E. Ballard, Madill, vice-president; Dr. E. F. Lewis, Kingston, censor; Dr. J. L. Hallard, delegate, Madill; and Dr. John A. Haynie, Aylesworth, was re-elected secretary-treasurer for the tenth consecutive time.

The Greer County Medical Society met in Mangum, March 6th. Dr. Edwin F. Davis had a paper on "The Conservation of Vision," Dr. Lee F. Watson on "Goiter," and Dr. Robt. L. Hull on "Orthopedic Surgery." Many out-of-town physicians attended the meeting, after which the District Society was organized.

The Kiowa County Medical Society met at Hobart, March 14, 1916, and the following program was had:

(1) Dr. G. W. Stewart: Quarantine. Diseases that need to be quarantined.—The time that each should be enforced.—Relation of Public and Physicians to same.—When and how should a quarantine be raised?

(2) Dr. Cherry, Mangum. Councillor for district. A Talk.

(3) Dr. D. A. Myers, Lawton: Suppurative Peritonitis of Diffuse Type. Discussion: Bunnardt, Cordell; Willis, Lone Wolf; Bonham, Hobart; Bryce, Snyder; Rogers, Clinton, and others.

(4) Dr. McLain Rogers, Clinton: Ulcer of Stomach with Differential Diagnosis.—Discussion: J. A. Muller, Snyder; Boyd, Gotebo; McIlwain, Lone Wolf; Lloyd, Hobart; Myers, Lawton, and others.

(5) Dr. L. J. Moorman, Oklahoma City: Early Diagnosis of Pulmonary Tuberculosis.

(6) Dr. A. H. Hathaway, Mt. View: Treatment in early stages of Pulmonary Tuberculosis. Refreshments.

This is reported to have been one of the best meetings ever held in Kiowa County.

MISCELLANEOUS, EXCHANGES, ETC.

NEW RULING ON HARRISON LAW

TREASURY DEPARTMENT

Office of Commissioner Internal Revenue,

Washington, D. C., March 11, 1916.

Interpretation of Section 6 of the Act of December 17, 1914, supplementary to T. D. 2213.

TO COLLECTORS OF INTERNAL REVENUE AND OTHERS CONCERNED:

Section 6 of the Act of Congress approved December 17, 1914, does not apply to extemporaneous prescriptions unless written for a preparation or remedy as hereinafter defined. The exemptions in that section apply exclusively to ready-made preparations and remedies prepared in accordance with the United States Pharmacopeia, National Formulary, or other recognized or established formula, usually carried in stock by a dealer and sold without a prescription, provided such preparations and remedies are sold, distributed, given away, dispensed or possessed strictly in good faith for medicinal purposes only, and not for the purpose of evading the intentions or provisions of the Act. The selling, dispensing or possession of any such preparation or remedy containing opium, or any alkaloid, salt or derivative thereof, for the purpose of satisfying or of ministering to a drug habit is not selling or dispensing for medicinal purposes within the intentions of the law.

Preparations and remedies within the intent of Section 6 are hereby defined to be ready-made compound mixtures prepared in accordance with a recognized or established formula as indicated above, which contain not more than one of the enumerated drugs in a quantity not greater than that specified, together with other active medicinal drugs in sufficient proportion to confer upon such preparations or remedies valuable medicinal qualities other than possessed by the narcotic drugs if dispensed alone. Simple dilutions of a narcotic drug made by admixture with inert or nearly inert substances, as sugar of milk, or simple solutions of narcotic drugs in water, syrup, diluted alcohol, flavoring matter, etc., are not bona fide medicinal preparations within the meaning of the exemption.

The several alkaloids, salts or derivatives of opium, if aggregated in the same mixture, are not exempt. A preparation which contains the permitted maximum quantity of any one of the alkaloids, salts, or derivatives, if fortified by the addition of any one of the other named alkaloids, or of its salts or derivatives, is not a preparation or remedy of the character contemplated by the exemption of Section 6.

Preparations or remedies which come within the exemptions of Section 6, as herein defined, may be refilled, if sold wholly in good faith for medicinal purposes only.

The refilling of a narcotic prescription for an exempted preparation or remedy, as herein defined, combined with other non-narcotic medicinal agents, with a consequent further dilution of the mixture, will be permitted.

W. H. OSBORN, Commissioner

Approved: Wm. P. Malburn, Acting Secretary.

OKLAHOMA COURTS

Liability of Owner for Damages Caused by Attack of Vicious Dog

6391—U. S. Tubbs v. James H. Sheers. Cleveland County. Opinion by Galbreath, C. Affirmed.

1. The law recognizes a right in the owner of a vicious dog to keep it for the necessary protection of life and property, but one exercising this right does so at his own risk and is held strictly accountable for any harm resulting to another. 2. While the owner of a dog is not liable in the absence of statutory provision, for any injury it may inflict upon another, unless he has notice of its inclination to commit such injury, the modern and more reasonable doctrine is that he need not have actual notice in order to make him liable. 3. Such notice may be either actual or constructive. Knowledge of one attack by a dog is sufficient to charge the owner with liability for all its subsequent acts. 4. Negligence, in the ordinary sense, is not the ground for liability in an action for damages by a ferocious dog, but the keeping of the dog with either actual or constructive knowledge of its vicious disposition, fixes liability for injuries which it may inflict.

Mining Company held Liable for Damage Resulting to Infants from Leaving Powder Accessible.

6581—Folsom-Morris Coal M. Co. v. John DeVork, etc. Coal county. Opinion by Collier, C. Affirmed.

F-M was engaged in mining coal, and in connection therewith, maintained an uninclosed powder house, in which it stored in cans blasting powder; the cans containing small quantities of powder were thrown on the ground near said powder house, where infants had access to such cans. From such cans De. and J., infants gathered a quantity of powder, which De. and J. carried in cans to about 300 yards from where said powder was obtained. J. strewed the powder carried by him upon the ground,

struck a match and applied it to said train of powder, about the time that De. attempted to pick up some of the said powder upon the ground. The powder upon the ground exploded, and ignited the powder in the can carried by De., which also exploded and severely burned and permanently injured De. HELD, That although such injuries be immediately brought about by the intervening cause of the striking of the match by J., such intervening cause was set in motion by the original wrongdoing of F-M, in throwing out said cans containing said small portions of powder in a place accessible to De. and J., and F-M is liable for the resulting damages caused by said explosion of powder. HELD, Further, That the "powder monkey," employed by F-M at said powder house, being present and not objecting to the removal of said powder by said De. and J. from said cans, his action in so doing must be regarded as the negligent act of F-M. HELD, Further, That under the facts of this case, a verdict of \$5,000 is not excessive.

Rights and Duties of Operators of Automobiles.

6479—O. C. White v. Frances M. Rukes. Canadian county. Opinion by Brett, C. Affirmed.

1. One who operates an automobile on a highway owes to other travelers the duty of controlling and driving it carefully so as to avoid causing needless injury, and in the performance of that duty is bound to take all the precautions which reasonable care requires under all the circumstances. 2. The owners of automobiles have the same right on highways as those riding horseback or traveling by other vehicles, but must use this means of locomotion with due regard for the rights of others. And the speed of the machine, its size, appearance, its manner of movement, the danger of operating it upon the highways, and the like, will be taken into consideration in determining the degree of care required of the operator of the automobile. 3. Where the driver of an automobile needlessly or recklessly runs his machine into the horse of a rider, upon a public highway, and thereby injures the horse, he will be liable for the injury.

"In Good Health" as used by Fraternal Order Applied—Effect of Failure to Initiate.

5131—Sovereign Camp of Woodmen of the World v. Mrs. Daisy Jackson. Bryan county. Affirmed. Opinion of the court by Watts, C.

1. When deceased has been accepted for membership by the local camp, and his application for insurance has been accepted by the head camp and benefit certificates issued, and same has been delivered to the member and his dues collected thereon, the lodge is estopped to deny that he is a member and will not be heard to object that he has not been initiated. 2. The phrase "in good health" is a comparative term, and the fact that deceased was suffering with a slight cold at the time the benefit certificate was delivered to him which afterwards developed into pneumonia and caused his death, will not defeat a recovery upon the benefit certificate under the stipulation that the insured be "in good health" when the policy is delivered to him. 3. Where the benefit certificate provides for the erection of a hundred dollar monument over the deceased member by the fraternal organization, and the lodge refuses to comply with its duty in this respect and denies liability, the beneficiary is entitled to recover the monument fee in money judgment against the organization.

ECHO ANSWERS

What has become of cholera? What has become of infant diarrhoea? What has become of smallpox, once a terror equal to plague? What has become of diphtheria and membranous croup? Who is gradually conquering tuberculosis, the greatest of human plagues? Who has dissipated the dread specter of hydrophobia? Who achieved the marvels of modern surgery? Has it not been the school of regular medicine? One by one hostile schools of healing have been reared to combat the ancient profession of Hippocrates. Where are they now? Only echo answers—where?—Lamar (Mo.) *Democrat*.

This is a bad year for county officers. One resigned last week in Rogers county. Another is under indictment at Chickasha under the drunkenness constitutional amendment, adopted in 1914. This amendment has not been applied very strictly heretofore but as the consciousness that there is such a constitutional provision, and that drunkenness does not have to be habitual to cost an officer his position, becomes more thoroughly felt throughout the state, officers, both county and city are likely to be more careful about placing themselves in the hands of their enemies by over indulgence.—*Harlow's Weekly*.

It costs far more to practice medicine today than it did ten years ago. In the first place, the cost of living has doubled. Today the automobile is almost a necessity in general practice to give the quick service which the public demands. And to cap the climax comes the inflated cost of drugs—a serious consideration for the physician who dispenses.

Yet in many counties in this state, medical practitioners are working for the same scale of fees their grandfathers worked under fifty years ago—when eggs were ten cents a dozen and garage charges were unknown.—*Ohio Journal*.

Former Governor George H. Hodges spoke in Chicago February 8, before the Congress on Medical Education, as a guest of the congress. An attack on fake cancer-cure concerns and quack

doctors was the keynote of Mr. Hodges' talk. "Monsters, fattening on the pain-racked bodies of their stricken victims," is the way he characterized such persons. He lauded the initiatory steps taken by the county, State and national medical organizations toward the betterment of medical science, and saw a new era in medicine in a comparatively few years because of these efforts.—*Lancet-Clinic*.

IT PAYS THE MANUFACTURER TO MAINTAIN ETHICAL STANDARDS

The notice of the removal of the Dextri-Maltose manufacturing plant from Jersey City to Evansville, Ind., published in one of our advertising pages, deserves more than passing attention. It furnishes evidence of the natural growth of a manufacturing enterprise which is now vacating its old factory with 18,000 square feet of floor space for a new location in the Central West and in a new plant with 300,000 square feet of floor space—sixteen times larger than the old one.

This removal from a comparatively small to a very large housing also affords striking proof that success awaits the manufacturer who produces something the physician really wants, and markets his products in accordance with the standards set up by doctors for the sale of products they use. The first commandment for the direction of the manufacturer under these standards is: "Thou shalt not offer to both physician and public, by advertising or otherwise, anything which requires medical skill to properly use."

This commandment has been ignored by some manufacturers of infant foods, who have persistently educated the public with pseudopediatrics, thereby tending to increase infant mortality and hampering the physician in the practice of scientific, or even rational infant feeding.

But ultimate reform in the manufacture and sale of infant foods was as inevitable as the reform that has taken place in the sale of pharmaceutical products. The day of mystery and tradition in infant feeding is passing rapidly.

The recent simplification of bottle feeding, rendering it possible, without impractical complication, for the family physician to successfully adapt the diet to the individual baby, has brought about a strong conviction that the direction of infant feeding is distinctly the proper work of the physician.

This conviction has in turn created a demand for forms of carbohydrate foods which can be freshly prepared in exact proportions to meet clinical indications; and for their sale without directions for use, so that the physician can personally control the administration of the food.

The firm, which announces herewith its removal from the east to larger opportunities in the west, early recognized the requirement by the medical profession for a product used in infant feeding, made and sold exclusively for physicians, with no appeal, nor information to the public.

This firm deserves no special commendation for the course it has pursued, it being its duty to follow it. Reference to the sales of Dextri-Maltose is made simply to show that it is remunerative for manufacturers to treat the medical profession fairly.

REPORT OF STATE BOARD OF MEDICAL EXAMINERS, JANUARY 11-12, 1916.

Licensed

Name	School of Graduation	Sch. of Prac.	Pr. Ct.	Home Address
Cadwalder Arrendell.....	Tulane University, 1914	R	91	Bliss, Okla.
Thomas Anderson Hartgraves....	Tenn. University, 1915	R	83	Soper, Okla.

Failed

Alabama.....	Birmingham Med. Col., 1915	R	79	
Indiana.....	Kansas City Univ. Med. Col.	R	69	

Licensed by Reciprocity

Frederick D. Lieser.....	Louisville, Univ., 1896	R		Enid, Okla.
Hector George Lareau.....	Marquette Univ., 1913	R		Tulsa, Okla.
Wm A. Sanders.....	K. C. Eclee. Med. Col., 1911	E		Vandervoort, Ark.
Yousouf J. Nabhan.....	Marquette Univ., 1913	R		Bristow, Okla.
Jas. Robert Graves.....	Arkansas Univ., 1914	R		Council Hill, Okla.
Edward L. Haney.....	Little Rock Col. P & S., 1911	R		Cameron, Okla.
John Adam Roberts.....	Rush Med. Col., 1890	R		Oklahoma City, Okla.
Frank H. McGregor.....	Louisville Univ., 1913	R		Mangum, Okla.
Daniel Boy Ensor.....	Lincoln Memo. Col., Knox. 1915	R		Hollister, Okla.
Wm. T. Joyner.....	Arkansas Univ., 1889	R		Roswell, N. M.
W. A. T. Lindsay (Col.).....	Mcharry Med. Col., 1912	R		Chickasha, Okla.
Wallace Leslie Dixon.....	Memphis Hosp. Med. Col., 1913	R		Yeager, Okla.

Licensed by Re-Registration

Wm T. Loftice, Newport, Ark.....	Gate City, Me., Col., 1905	R		Sallisaw, Okla.
Geo. D. Lowery, Hannibal, Mo.....	Keokuk Col., P & S., 1888	R		Hooker, Okla.
S. P. Winston, Rockingham, N. C.....	Louisville Uni., 1888	R		McMillan, Okla.
Wm E. Haygood, Buford, Ga.....	Grant Uni., 1897	R		Eaglewood, Kas.

NEW AND NONOFFICIAL REMEDIES

Since publication of New and Nonofficial Remedies, 1915, and in addition to those previously reported, the following articles have been accepted by the Council on Pharmacy and Chemistry of the American Medical Association for inclusion with "New and Nonofficial Remedies:"

Lysters Prepared Casein Diabetic Flour—Milk casein to which has been added a leavening mixture, sodium chlorid and saccharine. Used in the form of muffins in diabetes, etc. Lyster Brothers, Andover, Mass (Jour. A. M. A., Feb. 26, 1916, p. 653).

Antistreptococcus Serum Rheumaticus, Squibb.—Produced from strains of streptococci from the joints and blood of cases of rheumatism. The serum is intended for use in cases of acute articular rheumatism. E. R. Squibb and Sons, New York (Jour. A. M. A., Feb. 26, 1916, p. 653).

PROPAGANDA FOR REFORM

Hypochlorites in Infected Wounds.—Dakin points out that he claims no credit for the "discovery" of the "new antiseptic." He explains that the "new antiseptic" was discovered by Berthollet in 1788. The solution used by Dakin and others is essentially the well-known Labarraque's solution or solution of chlorinated soda. The claims as to the efficiency of the various modifications which are being used in France and England are decidedly contradictory. The one conclusion which all results with the various hypochlorite solutions appear to justify is that hypochlorites, whether applied in an acid solution, in an alkaline solution or in a neutral solution, are of genuine value in the treatment of infected wounds (Jour. A. M. A., Feb. 5, 1916, p. 430).

Oxybon Declared Fraudulent—On January 15, 1916, a fraud order was issued by the postmaster-general against the Oxybon Company, Chicago. The Oxybon was one of the gas-pipe frauds, which included the Oxydonor, the Oxyphathor, and the Oxygenor (Jour. A. M. A., Feb. 12, 1916, p. 526).

The Therapeutic Value of the Hypophosphites.—At the request of the Council on Pharmacy and Chemistry, Dr. W. M. Marriott, Johns Hopkins University, has examined the evidence for and against the therapeutic value of the hypophosphites. Experiments were carried out to determine the "food" value of hypophosphites. The hypophosphites were introduced into medicine by Churchill in 1858 on the basis of an incorrect theory and utterly insufficient and inconclusive clinical evidence; their use has been continued without justification by any trustworthy evidence for their efficiency. By actual trial on human subjects Marriott shows that at least 85 per cent. of the ingested hypophosphites are excreted unchanged. Further, he holds that there is no proof that the remaining 15 per cent. is available to the organism. It is doubtful if there are any conditions in which the body suffers from lack of phosphorus. Marriott concludes that there is no reliable evidence that hypophosphites exert a physiologic effect; it has not been demonstrated that they influence any pathologic process; they are not "foods". If they are of any use, that use has never been discovered (Jour. A. M. A., Feb. 12, 1916, p. 486).

The Effect of Opium Alkaloids on Respiration.—D. I. Macht has reinvestigated the effect of opium alkaloids on respiration. He divides the alkaloids of opium in two classes: In the one class is morphine, the prominent sedative alkaloid, which may not interfere with efficient respiration when the dose of the drug is small. In contrast with this are narcotin, papaverin, narcein, thebain and cryptopin, all of which are stimulants and in large doses are excitants of the respiratory center. Codein belongs to the morphin class, though in large doses it may also excite the respiratory center. The action of mixtures of opium alkaloids is a summation of their individual effects. It thus appears that if the object sought is a reduction of the labored activity of the respiratory muscles in a given case, the drug opium itself or mixtures of its alkaloids are to be preferred to morphine alone. If, on the other hand, it is desired to diminish the excitability of the cough reflex mechanism, it seems that a simple substance, as morphine or dodeine, is to be preferred (Jour. A. M. A., Feb. 12, 1916, p. 514).

Fermented Milk.—While there is no conclusive evidence that *Bacillus bulgaricus* is able to establish itself in the intestine in such a way that other bacteria are driven out, it is undoubtedly true that in many cases marked improvement has resulted from the ingestion of milk cultures made from it. It is by no means certain, however, that the results which have been obtained by the use of milk cultures have been attributable to any peculiar virtue in the organism itself. The beneficial effects of a sour-milk diet is attributable, perhaps, not so much to the bacteria contained in the milk as to the milk itself, which provides material for an acid fermentation in the intestine. Fermented milk is so well tolerated in many cases that their use should in general be encouraged from the standpoint of nutrient values, quite apart from the problematical "autointoxication" propaganda (Jour. A. M. A., Feb. 19, 1916, p. 574).

Diarsenol.—Diarsenol, Synthetic Drug Company, Toronto, Canada, is said to be chemically identical with salvarsan. It has not been examined in the A. M. A. Chemical Laboratory nor do any reports of trials appear to have been published which demonstrate its value or safety. As salvarsan is covered by United States patent the American agents for salvarsan will probably object to the sale in the United States of a substitute (Jour. A. M. A., Feb. 19, 1916, p. 590).

Tanlac.—Food Commissioner Helme of Michigan reports: "A new panacea for the cure of 'all ailments of the stomach, kidneys and liver, catarrhal affections of the mucous membranes, rheumatism, nervous disorders and the like' is offered to the public under the name of Tanlac. The label on the bottle neatly avoids the pure drugs act by claiming to be only a 'tonic and system purifier.' An analysis of Tanlac in the laboratory of this Department shows the following: Alcohol 16.4 per cent.,

Glycerin 2.0 per cent., Licorice present, Aloes or Cascara present, Gentian present, Alkaloids (Berberin) trace. The presence of a trace of tartaric acid shows that wine is the base of this medicine. The 16 per cent. alcohol gives it the 'kick' that makes a fellow feel good and ought to fill a long felt want in 'Dry Counties.' Aloes is a laxative. Gentian is a bitter drug, a so-called tonic. If the reader wants to be cured by the Tanlac route at one-fourth the expense, let him get a quart bottle of good sherry wine. Then go to the local druggist and get 1 1-4 drams of glycerin and 2 drams each of aloes, gentian, licorice and cascara. Mix (if you wish) and you will have Tanlac so near that neither you nor the manufacturer can tell the difference. This formula will give four times the quantity found in an ordinary \$1 bottle of Tanlac (Jour. A. M. A., Feb. 26, 1916, p. 676).

Strontium Salicylate not Superior to Sodium Salicylate.—In a series of carefully controlled trials, carried out in the Lakeside Hospital, Cleveland, M. A. Blackenhorn shows that strontium salicylate possesses no advantages over sodium salicylate as regards either therapeutic efficiency or freedom from undesirable by-effects. The salicyl content of strontium salicylate is about four-fifths that of sodium salicylate. This smaller salicylate content may have contributed to the notion that strontium salicylate is less likely to cause salicylism. This notion may have also arisen from the fact that the more expensive preparations are likely to be given in smaller doses than the cheaper sodium salicylate. That the strontium salt of salicylic acid has no advantages over the sodium salt, has also been pointed out in the report of the Council on Pharmacy and Chemistry on Rheumalgine. (Jour. A. M. A., Jan. 29, 1916, p. 331 and 362).

THE DOCTOR'S HEAVEN

I dreamed that I was talking
With a doctor old and gray
Who told me of a dream he had,
I think 'twas New Year's Day.

While snoozing in his office,
The vision came to view,
For he saw an angel enter.
Dressed in garments white and new.

Said the angel, "I'm from heaven,
Peter sent me away down
To bring you up to glory
And put on you a golden crown.

You've been a friend to everyone,
And worked both night and day;
You've doctored many thousands
And from few received your pay.

So we want you up in glory,
For you have labored hard,
And the good Lord is preparing
Your eternal just reward."

Then the angel and the doctor
Started up to glory's gate,
But when passing close to Hades,
The angel whispered "Wait.

I've a place I want to show you,
It's the hottest in all hell
Where the ones who never paid you,
In torment must always dwell."

And behold, the doctor saw there
His old patients by the score;
Then grabbing up a chair and fan
He wished for nothing more.

Just content to sit and watch them
As they sizzle, singe and burn,
And his eyes would rest on others
Whichever way they'd turn.

Said the angel "Come on, doctor,
There the pearly gates I see;
But the doctor only murmured
"This is heaven enough for me."

—Gage (Okla.) Record.

NEW BOOKS

In this department publications sent THE JOURNAL will be acknowledged as they are received. Reviews of new publications will be made only as space and time permit. Publishers are requested to bear this in mind in forwarding books, etc., for review.

CANDY MEDICATION, by Bernard Fantus, M. D., Professor of Pharmacology and Therapeutics, College of Medicine, University of Illinois, Chicago. Cloth, 82 pages, price \$1.00. C. V. Mosby Company, St. Louis.

INFANT FEEDING, a handbook, by Lawrence T. Royster, M.D., Attending Physician Bonney Home for Girls and Foundling Ward of the Norfolk Society for the Prevention of Cruelty to Children, Physician in charge of King's Daughters' Visiting Nurse Clinic for sick babies. Illustrated. Cloth, 144 pages, price \$1.25. C. V. Mosby Company, St. Louis.

This little book is dedicated "To the overworked and Underpaid General Practitioner," who as the writer says must be specialist as well as all round family physician. The writer wastes no space or words over speculating, but gives his views in a forceful, specific manner. The size and make-up of the book bespeak for its convenience of access often lamentably lacking in larger works. It should be of service to the busy man.

DISEASES OF THE NOSE AND THROAT. By Algernon Coolidge, M. D., Professor of Laryngology in the Harvard Medical School. 12 mo. of 360 pages, illustrated. Philadelphia and London: W. B. Saunders Company, 1915. Cloth, \$1.50 net.

SYPHILIS AS A MODERN PROBLEM.—By William Allen Pusey, M.D., Professor of Dermatology in the University of Illinois. Price, cloth, 50 cents; paper, 25 cents. Pp. 129. Chicago: American Medical Association, 1915.

The following review appeared in The Journal of the American Medical Association for Sept. 18, 1915, p. 1051.

This book is a monograph reprinted from the Commemoration Volume issued by the American Medical Association "as a tribute to the medical sciences which made possible the building of the Panama Canal and the Panama Pacific Exposition."

The publication of this discussion of the present status of one of the so-called three great plagues—syphilis, tuberculosis and cancer—is opportune. Two decades ago tuberculosis, the fellow of syphilis in this triad of diseases, was as little understood by the everyday man as syphilis is today. In the comparatively brief interval of twenty years, a campaign of education and organized propaganda for the combating of consumption has transformed the situation. The forces of intelligent public opinion and of public and private funds, and the power of disinterested men and women have brought into being a great system of physical and educational aids for the tuberculous which have begun to realize their full possibilities. Against cancer our ignorance limits our capacity for effective control. Yet even in the case of cancer there are large endowments for study, and a consistent campaign for the better education of the public is under way.

Against syphilis, on the other hand, little or no social headway has been made. The confounding of the sanitary aspects of a communicable disease with questions of morals, and the effects of a traditional prudery have stifled advance in the social control of this disease. The United States is conspicuous in this backwardness. In strange contrast with this situation, medical knowledge of syphilis has advanced in the last decade with unparalleled rapidity. At the present time it is safe to rank the strategic position in regard to its sanitary control as equal to that for the control of malaria and yellow fever. In one direction, medicine holds syphilis in the hollow of its hand; two generations of intelligent attack could see it reduced to the status of a sporadic infection. In the other direction, the unwillingness to act of the public, on whom help depends, has prevented all organized effort for the control of this disease. Syphilis is a sanitary problem, that it must and will be solved by society sooner or later is inevitable. Its importance cannot be exaggerated! It breeds misery and perpetuates it. It is a source of public cost, a drain on human efficiency, and a stumbling block in the progress of mortality and decency whose all-pervading influence is appreciated only by those who work with it all the time. Into this situation, Dr. Pusey's book projects itself with a peculiar force. It considers syphilis from the standpoint of its effect on society; not as a disease which medicine is called on to treat. The whole subject is broadly sketched; its course and its pathology are given in sufficient detail to allow the reader to get a mental picture of the disease. Preceding this there are three chapters on the history of syphilis, the most complete statement of this subject in English, which furnishes a unique historical perspective. The rest of the book concerns the study of the general problems of syphilis; the prognosis of syphilis; syphilis and marriage; the etiology of syphilis, and the prophylaxis of syphilis. In these chapters, such subjects as the relative frequency of tabes and paresis, the effect of syphilis on length of life, the time when the syphilitic may marry, the prevalence of syphilis, its comparative frequency to men and women, the question as to whether or not syphilis is on the increase, and syphilis and prostitution are considered. The whole book is a foundation for the last chapter—the prophylaxis of syphilis. Here the author shows how syphilology has finally arrived at a point where the prevention

of syphilis is practicable by sanitary measures. He points out what these measures are, and so furnishes the strongest argument for the inauguration of an organized sanitary attack on this disease.

The work is eminently sane and without sensationalism or exaggeration. It does not affront with needless horrors, nor is it written in the spellbinding style of campaign literature. The book is fitted to serve as a guide to a sustained and effective interest in the problem on the part of intelligent readers. It is not a medical textbook, nor is it a primer. It is intended for the intelligent lay reader, but it may be read with equal profit by the intelligent physician. It considers syphilis from a detached point of view, from which point the physician ordinarily does not think of it. It is filled with facts which are carried through to legitimate conclusions, and from which are deduced practical suggestions, and is worthy of the thoughtful consideration of intelligent men and women.

SEXUAL IMPOTENCE. By Victor G. Vecki, M.D., Consulting Genito-Urinary Surgeon to the Mt. Zion Hospital, San Francisco. Fifth edition, enlarged. 12 mo. of 405 pages. Philadelphia and London: W. B. Saunders Company, 1915. Cloth, \$2.25 net.

This new edition of a splendid work on a much misunderstood and neglected subject could hardly be handled better than by such a master of the subject as is Vecki. For many years he has issued this volume with added observations as they appeal to him. To physicians handling genitourinary patients and its actual and neurotic side issues and to the physician who likes entertaining reading somewhat aside from his daily routine this book will be found most valuable.

POST-MORTEM EXAMINATIONS. By William S. Wadsworth, M.D., Coroner's Physician of Philadelphia. Octavo volume of 598 pages with 304 original illustrations. Philadelphia and London: W. B. Saunders Company, 1915. Cloth, \$6.00 net; Half-Morocco \$7.50 net.

To those having the post-mortem examination to perform, this book should prove a great aid. It is complete as to minute detail, which must always be zealously and painstakingly followed if the examination is to result in positive and indisputable information. In this connection this work may be said to be a medico-legal contribution of decided value. The author has liberally included in the work deductions formed on account of the conditions found at examination, tells the whyfore and whereof in such a manner as to render the book intensely interesting and not the dry subject one might conclude such a work to be.

The cuts are all original and cover every phase of the text necessary to a clear understanding.

A TEXT-BOOK OF PATHOLOGY. By Alfred Stengel, M.D., Professor of Medicine, University of Pennsylvania, and Herbert Fox, M.D., Director of the Pepper Laboratory of Clinical Medicine University of Pennsylvania. Sixth Edition, Reset. Octavo of 1045 pages, with 468 text-illustrations, many in colors, and 15 colored plates. Philadelphia and London: W. B. Saunders Company, 1915. Cloth, \$6.00 net, Half Morocco, \$7.50 net.

Stengel's work in pathology has been long accorded a high place in the estimation of students of pathology and this volume is most commendable from the standpoint of arrangement and beauty of cuts and color plates.

Among the new features added should be noted a wide rearrangement of chapters on Inflammations, Nutrition, Metabolism, etc. A new section on Transmissible Diseases has been added and a chapter on the Glands of Internal Secretion and Their Pathology has been included, while the chapters on Diseases of the Nervous System have been somewhat curtailed. The plates in color are many and varied and go greatly toward placing the book in an unusually high class.

"FISHERITIS"

"The air we breathe, the food we eat,
And all we drink is "pizen,"
And how we live from day to day,
Is really quite surprisin."
Malaria rages in the South,
And North and East and West,
Pneumonia mows us down like grass
And typhoid does the rest.
But of all the microbes, great or small,
That Nature sends to fight us,
The worst that ever struck a man,
Is the germ of "Fisheritis."
When this disease gets hold on you,
Your name is "Dennis Mud,"
For it never quits working
When it once gets in your blood.
So when the thing gets chronic
It simply can't be broke,
You've got to go and fish it out,
Or just lie down and croak.
And when it's cured it won't stay cured,
Like any other sore,
So when the thing breaks out again,
You've got to fish some more."

— Unknown.

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Annual Meeting, Oklahoma City, May 9-10-11, 1916.

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Reciprocity with Georgia, Kentucky, Mississippi, Nevada, North Carolina, Wisconsin, Kansas, Michigan, Nebraska, New Mexico, South Dakota, Tennessee, West Virginia.

Next Meeting—Oklahoma City, March 6, 1916.

Address all communications to the Secretary, Dr. R. V. Smith, Daniel bldg., Tulsa.

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A VESICAL CALCULUS

W. E. DICKEN, M. D., F. A. C. S., Oklahoma City, Okla.

The excuse that I have for presenting such a time-worn subject as the one under consideration is the size of the stone we here present; as it is so very unusual in this day of modern surgery for one to postpone cystotomy so long.

In renewing the statistics of vesical calculus, we find various anomalies in the size and weight of stones. LeCat speaks of a calculus weighing over three pounds and Marand is accredited with having seen a calculus which weighed six pounds.

In 1883, Dr. Cross collected reports on seven hundred and four stones and remarked that only nine of these weighed above four ounces, and only two above six. All of these were removed successfully.

Harmon of Norwick reports one of fifteen ounces; Kline one of thirteen ounces and thirty grains; Mayo of Winchester fourteen ounces and two drams; Cheselden twelve ounces, and Pare in 1570 removed a calculus weighing nine ounces.

Sir Astley Cooper remarks that the largest stone he ever saw weighed four ounces and that the patient died within forty hours after removal.

Dr. Birch in 1684 reports an account of a stone weighing five ounces, before the Royal Society in London.

I saw in the Hunterian Museum in London a stone weighing forty ounces and measuring sixteen inches in circumference.

By supra-pubic operation, Duquise removed a stone weighing fifty-one ounces, from a patient who survived six days.

It has been said in history that a vesical calculus was removed from a dead boy at St. Edwards, which was as large as the head of a new-born child and that Thomas Adams, Lord Mayor of London, who died at the age of eighty-two, had in his bladder at the time of his death a stone which filled the whole cavity and which was grooved from the ureters to the urethral opening, thus allowing the passage of urine.

Enough, however, of the records of former days, for these facts are as a tale that has been told and never again will it be probable that a twenty-four or fifty-one ounce stone will seclude itself in the recesses of the bladder wall until death claims its victim, as it did in the case of the Lord Mayor of London.

The stones which are commonly found in the bladder may roughly be divided into uric acid, oxalate of lime, and phosphatic calculi. A stone composed wholly of any one of these constituents is, however, not common, the usual condition being a mixed form, in which the uric acid or oxalate of lime nucleus is covered by phos-

phatic crust; sometimes a succession of layers may be found by alternating deposits of different components. Occasionally we have concretions found in the bladder as cystin or xanthin.

For surgical classifications, however, stone in bladder may be divided into those which form in an acid, and those which form in an alkaline urine. The former class include the uric acid and oxalate of lime stones, while the concretions composed mainly of phosphates belong to an alkaline urine.



The "Molecular Coalescence" or the Rainy law of stone formation is briefly this: "In the presence of colloids or albuminoid substances, crystallin materials become spheroidal in shape and coalesce in rounded forms; that is to say, crystals of uric acid in their usual rhomboidal shape may for long periods be thrown down, washed along and be passed out with the urine, without showing any tendency to concretion." Finally the irritation of the urinary tract leads to the exudation of albuminoid material which, acting on the crystals, change their molecular form and create in them the tendency to coalesce.

Of course the albuminoid material may be supplied in other ways. Necrotic bits of tissue are, it is well known, likely to be incrustated with lime salts, as also

is any foreign substance after reaching the bladder or masses of bacteria and bits of blood clot.

Stones usually occur singly, but sometimes many, up to several hundred, may be found in the bladder. Stones may be hereditary, or a gouty, or a rheumatic diatheses, by favoring the production of acid urine, fosters the tendency to stone, while the quality of drinking water, soft or hard, is not proven to have any influence whatever on its manufacture.

The symptoms of stone in the bladder are first pain, second frequency of micturition, and third haematuria. The pain is severe at the end of micturition, as the bladder closes down on the stone and is referred either to the end of the penis or perineum and rectum; this pain, of course, is increased by jolting or violent movements of the body, riding, etc. Frequency of urination may or may not be diminished by rest in bed.

We usually have blood, making the urine a wine or red or smoky color, or the blood may be passed with the last few drops of urine, the blood being increased by exercise or jolting. When these important symptoms are present, we often get a history of previous attacks of renal colic, or of the appearance of gravel in the urine.

The stone will frequently fall in front or against the urethral opening, causing a sudden stoppage, and the diagnosis is further conferred by the bi-manual, X-ray, or sound exploration of the bladder. Differentiating the difference between prostatic conerctions or rough projection of the bladder wall, which may be covered with phosphatic deposits, and new growths which may be similarly incrustated, is best done by the cystoscope.

Let me recite this case. Patient, male, age 32, entered hospital May 20, 1913, because of pain in his bladder, incontinence of urine. The present trouble dates back eight years when he passed a gravel, having more or less trouble with his bladder ever since until three years ago, when he began to have symptoms of cystitis, and passing some blood after jolting, or when riding horseback or in wagon, and as he is a farmer this bothered him quite a good deal.

When he entered the hospital he was drinking a great deal of water, and in twenty-four hours after his admission he passed one hundred and twenty-six ounces of urine, which showed trace of albumen, no sugar, no casts, and no indican. Upon cystoscopic examination a stone was plainly visible, buried in a pocket, just behind and to the right of the prostate. He complained of no other symptoms than a dull pain in the bladder, which was very much increased by jolting, and frequently he said he would find himself compelled to hold up the perineum with his hand, for support, to relieve the dragging sensation.

By supra-pubic incision a stone was removed, weighing three ounces and thirty grains, length three inches and circumference six and one half inches. The bladder wall was closed with drainage by catheter through the penis, which allowed wound to heal by first intention, patient leaving hospital May 30, 1913, in splendid condition.

The doctor informed me the other day that he had gained thirty pounds in weight and was working every day on his farm.

Lithotomy is the surgical operation that interests us most in this country, as vesical calculi are so rarely encountered that we do not have sufficient practice to become expert with the lithotrite.

In New York City, with its numerous hospitals, it is only occasionally that you will see posted at the Academy of Medicine (where many operations are posted each day) an announcement of an operation for vesical calculus.

Of several methods of operation, for example, the perineal median lithotomy, cystotomy, colpo-cystotomy and litholapaxy, the suprapubic is the operation of choice. It being extra peritoneal and allowing an incision in the bladder large enough to see, affords the best choice of procedure for the removal of a large

size calculus; those incapsulated or adherent, those stones retained in a post-prostatic pouch, as this one was, affords the most excellent avenue of approach.

In conclusion I will say, in regard to the relative value of the different operations for vesical calculus that in children litholapaxy is almost out of the question, on account of the small size of the urethra, and in adults suprapubic cystotomy should be done in all cases when the stone is over one half of an inch in diameter.

INTESTINAL OBSTRUCTION

F. J. WILKEMEYER, Muskogee, Okla.

The diagnosis of intestinal obstruction, if one will accept the text-book description of same, is a comparatively easy matter. The very word "obstruction" recalls to the mind that whole gamut of symptoms: meteorism, visible peristalsis, passage of neither feces or flatus, with persistent uncontrollable vomiting, later becoming fecal, little or no abdominal rigidity. Reviewing these symptoms, one naturally turns to "passage of neither feces or flatus, with persistent uncontrollable vomiting," as our sheet anchor.

Unfortunately this is not true, as the following case exemplifies: June 24, 1915, 10:30 p. m., I was called to see a patient who had just been sent in. The patient, a man of forty years, was sitting at the side of the bed, doubled up on a slop jar, straining every muscle of his body to get a bowel movement. He was perfectly conscious and apparently suffering excruciating pain. A satisfactory examination was impossible, he being one minute in bed and the next moment on the slop jar. Purgatives and water by mouth were invariably retained. Several high-compound enemata returned with fair results. His pupils were widely dilated. Pulse at the beginning of examination barely perceptible; at the close it was 32 and of good quality. Temperature 97. Abdomen markedly distended.

Turning to his wife for a satisfactory history, I elicited the following facts: The husband, the patient, had been a morphine habitue for the past seven years. He had taken the "cure" several times. Last Saturday, June 19, 1915, he began treating himself by taking belladonna, spartein, strychnine, and purgatives. June 20, 1915, he became wild and uncontrollable. Dr. Woodcock was called in and tells me he saw him on three different occasions and prescribed bromide and belladonna. June 23, 1915, his abdomen became markedly distended and an uncontrollable diarrhoea set in.

Is this a case of intestinal obstruction? Apparently so; although four days elapsed without fecal vomiting, one still can argue on low obstruction. But what about the passage of some flatus or feces via high-compound enema? And what about the onset of the disease being ushered in with an uncontrollable diarrhoea? Surely that is not the text-book picture of intestinal obstruction. How can one explain the diarrhoea followed by stoppage with terrific straining? I believe one will find a spasm of the circular-muscle fibres; in other words, a spastic-paralytic ileus. I concluded to wait until morning, as I felt surgery could do little for him. The next morning fecal vomiting, projectile in character, set in and against my better judgment I operated. Median incision, ileum distended, ecchymotic presented at the wound. About two inches from ileo-caecal valve there was an annular constriction-ring embracing the ileum. The caecum and large intestines were collapsed and of normal color. The constriction is apparently due to a spasm of the circular-muscle fibres. An ileostomy was done. Death 2 p. m. same day. Post-mortem elicited no further explanation for the constriction; the spasm was still present.

I have delved into the literature and text-books of toxicology and find no explanation of same. Dr. Robert Greene reports two cases, and to him I am indebted for the term spastic-paralytic ileus. His cases were post-operative, and

were apparently due to undue grasping of ileum in order to exert traction on caecum during appendectomy.

The site of the annular constriction was, as in my case, near the ileo caecal valve. Troune (Abst., J. A. M. A., p. 1999, No. 64) reports two cases, and states he knows of twenty cases on record, exclusive of lead poisoning. First case, boy of 12 years, pain came on during a running race. During the operation the contraction subsided. Second case, woman 55 years; small intestine contracted over a stretch 10 or 20 inches long at four different places. The patient had broken her ribs four days previous. The other cases cited were post-operative. Dr. Greene explains the pathology as a mechanical injury to the plexuses of Auerbach and Meissner. He advises traction never should be made on ileum for the purpose of bringing caecum into the wound.

Second case: January 25, 1916, entered hospital at 2 a. m. P. I. Taken ill five days ago. Fever with no other symptoms at first. Dr. Fisher called and gave enema, bowel movement returned. Since three days ago, no bowel movement, with vigorous catharsis. Vomited first day and occasionally the last 24 hours. No pain until last day or so. Now dull pain at epigastrium and upper abdomen. Sedative hypo just previous to admission. History unreliable on account of patient's condition. P. E.: Tympanitic, tenderness everywhere, most over upper abdomen. No visible peristalsis, no rigidity of abdominal muscles. Apathetic, uncomplaining, lying on right side. Abdomen shows old striae-gravidae. Vaginal examination: induration both fornices; uterus slightly mobile. Patient complains of no pain on vaginal examination. Temperature on admission, 100. Pulse at examination, 120. During the day colonic flushings resulted in large amount of flatus, strings of mucous and slight brown fluid. W. B. C. 14000. Temperature throughout the day, 98.4-98.8. Pulse at 5 p. m., 128. Condition, little change; patient has vomited several times, not fecal, yellowish. Operation 7:30 p. m., January 25, 1916. Median incision. Much pelvic adhesions. Double pyosalpinx. Several omental bands crossing abdomen. Ileum compressed by omental strings size of shoe string, deep in right lower quadrant. Right tube and left tube and ovary removed. Omental string cut. Collapsed gut below obstruction filled at once. A little free pus from right tube, ruptured by manipulation, wiped up. Cigarette drain introduced into lower angle wound and closure by layers; two s. w. g. tension sutures to skin. Post-operative history: Drain out and left out 48 hours after post-operation; tenth day skin healed by first intention, except at site of drainage tube; bowel movements o. k., still running; slight temperature, and complains of pain now and then in pelvic region. After careful study pre-operatively, I strongly inclined to pelvic peritonitis, owing to the presumptive character of the patient and the pelvic findings, plus fever in the beginning. However, one could not depend upon the patient's personal say-so. She did have a bowel movement as Dr. Fisher saw her in the beginning. Viewing her as a whole, she was not the picture of a peritonic, nor that of pure intestinal obstruction, and yet one was inclined to consider the condition as a parietic-bowel. Fortunately an operation saved us from making a most grievous error.

PNEUMONIA IN THE COUNTRY*

J. C. WATKINS, M. D., Checotah, Okla.

I am not going to tell you how to treat pneumonia as it should be treated in High Society, or among the Upper Four Hundred. You can find that method described in any of the text books much better than I could do were I so disposed to try.

I am going to tell you how we do it in the "sticks." At 2 a. m. the little alarm clock attached to the side of the wall is suddenly seized with a "fit of ring-

*Read before the McIntosh County Medical Society at Checotah, February 1, 1916.

ing," and simultaneously your "better half" lands an upper left on your solar plexus and at the same time jabs you in the short ribs and says: "Do you hear that phone ringing?" Neither of the above mentioned fixtures will let up till you come forth; and this is about what you hear; "Say, Doc, we want you to come out on the hill one mile west and one mile south of Onapa. Mary has had a chill, got an offul pain in her side and we think she has got 'new-mony' ". "Well, say Bill, don't you think you could wait till daylight, it won't be long." "No, Doc; she is mighty sick, and if you can't come we will have to call a doctor from Eufaula." Then we decide to come RIGHT out, because we need the money—next fall, out of the first bale of cotton sold.

The bridge just south of the grave yard being washed out, we have to go around by Carr Creek, then double back a mile north in order to miss the big mud hole in the west section, caused by a ear load of coal having been hauled to the oil well just after the last big rain.

Finally, just before daylight, you reach the mansion on the hill and you find Mary with all the symptoms mentioned over the phone, and a little personal investigation on your part reveals about all those mentioned by Dr. McCulloch (symptoms and complications), and after going through all the stunts Dr. Montgomery speaks of (physical signs and differential diagnosis), you will have eliminated everything else, so you are forced to confirm the long distance diagnosis.

You will have observed ere this that the treatment has already been begun, Mary's chest having been deluged with turpentine, coal oil, grease and Rawleigh's anti. pain oil, the same being driven in by a soothing application of hot flannel; either the above or a copious plaster of antiphlogistine.

About this time we assume command of the battle and after "getting the enemy's range" we put the allies (relatives and sympathizing friends) on a double quick retreat to kitchen, retaining only a couple of Red Cross cooks to put the camp in order. And these are about the instructions we leave: Put out most of the fire, open the doors, raise the windows, and let a little Oklahoma sunshine and God's pure air in this room. Keep the room 65 to 70 degrees or so cold that all attendants will shiver with cold. Keep Mary warm with plenty of warm cover and, if necessary, put hot water bottles around her. Give her a warm sponge bath once a day anyway. Do not let her lie in one position too long, but turn her from side to side every hour or two. Give her plenty of cold water and lemonade to drink; feed her plenty of a liquid diet that is easily digested: milk, broths, eggnog, etc.

After having completed the preliminary or hygienic instructions, you will be confronted with the medicinal treatment of the case in hand. Not having a specific for pneumonia, as in some other diseases, we stand our ground and defend the camp as we are charged by the enemy from any and all directions. The first thing always to do is to see that our own alimentary trench is thoroughly cleansed out, and this is done very nicely with appropriate charges of hg cl, followed with salines or oil.

If General Fever is crowding us too high, we sometimes give small doses of phenacetine or aspirine; but prefer H₂O externally, internally and eternally.

When Major Pain besieges the "pleural trench," we combat him with an external application of mustard, and if necessary we throw up a protecting breats-work of opium of some form.

For sleeplessness and delirium, we give sulphonal, trional, chloral or bromides. As a stimulant, both respiratory and circulatory, we use strychnine, whiskey and ammonia. For cough we use the expectorant or sedative mixtures as the case may demand; we have sometimes used heroin and terpinhydrate.

We have on two occasions exploded a submarine (hypodermically) bomb (Parke-Davis's Pneumonia Phylacogen) on the advanced guard of the combined

attack of all the allies. In the one case we didn't hear the drummer boy beating a retreat until on the morning of the ninth day, and in the other it was a funeral march that we heard.

Though the efficiency of the remedy is doubtful, or at least in question by such men as Osler, Tyson, Anders, and Hughes—Park, Davis and Mulford to the contrary, we have used the pneumonia serums, bacterins, and vaccines. In many cases we have thought we have gotten good results, while in other we were not able to see any special benefits.

Osler says that pneumonia is a self-limited disease that can neither be cut short or aborted by any known means of treatment at our hands; that being the case, after you have used all the armaments of warfare at your command, and "if the Lord is with us," all is good and well, but if not, you can only console yourself by signing a treaty of peace prepared by the State Board of Health and get ten cents from the County Commissioners for all of your trouble.

VESICULITIS AND BELFIELD VASOTOMY AND VASOSTOMY*

BROWN W. RANDEL, B. Sc., M. D., Muskogee, Okla.

Inflammation of the seminal vesicles may occur during gonorrhea as a result of direct extension of the process from the posterior urethra. The exciting causes are posterior urethritis epididymitis, also coitus, masturbation, sexual excitement, alcoholic excesses or exercise, tuberculosis, staphylococcic and B. Coli infections, and malignant growths. But what we have mostly to deal with is gonorrheal vesiculitis. Acute vesiculitis, however, is less common than the chronic form, which may follow the former, but which more frequently appears in a subacute form during the course of chronic urethritis.

Treatment which I wish to propose is the Belfield Vasotomy and Vasostomy, indicated for injection of a solution into the vas, ampulla and seminal vesicles for the treatment of acute and chronic gonorrheal seminal vesiculitis, and may also be employed in colon bacillus and staphylococcic infections.

The injection solution most commonly used is Colargol in 3 to 5 per cent. solutions; Argylol or Protargol may be used in weak solutions, but the advantage of Colargol is that it is thicker and remains longer in the seminal vesicle and ampulla than the above just mentioned and has more antiseptic properties. The amount varies, but about three or four c. c. is sufficient to fill the vas deferens, ampulla and seminal vesicles.

The instruments required for this operation are scalpel, cataract eye knife, sharp-pointed tenotome, finetoothed forceps (2 prs.), fine curved needles (conjunctive), fine silver wire tubes and medium silk worm gut, blunt hypodermic needle and 5 c. c. hypodermic syringe and skin forceps or long Mayo intestinal needles.

Method: By palpation of the cord, distinguish the vas deferens and bring it close to the surface of the skin, either in the posterior lateral aspect of the scrotum or just below the external ring. Secure the vas in this position by a round needle (Mayo's intestinal needle or with skin clamps or two needles or skin clamps at different points about 1 cm apart); pass through the skin beneath the vas, and, if a needle, out through the skin again. Do not injure the cord in doing this. Incise the skin and coverings of the cord over the vas and retract the edges of the incision, expose the vas, scrupulously avoiding injury of the vessel of the vas either in sharp or blunt dissection.

Dr. A. T. Osgood of New York makes a transverse incision or nick in the wall of the vas with fine eye scissors through one-half or less of the circumference to open its lumen. With fine probe-pointed eye scissors passed into the lumen, make a small 1-2 cm incision through the wall of the vas in a longitudinal direction,

*Read before Muskogee County Medical Society, March 27, 1916.

pass a fine curved eye needle threaded with fine silk or horsehair into the lumen through the mucus surface and wall of the vas on each side of the incision and secure the upper suture to the upper edge of the skin of incision. Other sutures may be placed in the same fashion below to secure a vasostomy.

Dr. Belfield, instead of making the transverse incision, sometimes cuts down longitudinally with a small scalpel or a fine cataract eye knife about 3-4 cm in length and fixes it to the wall of the scrotum as before mentioned.

In my hands I find it easier to make the transverse incision or nick in the vas as Dr. A. T. Osgood does, as the Belfield slit longitudinally with the cataract knife or scalpel is harder to do and I do not think it should be attempted by the inexperienced genito-urinary surgeon. Then pass a medium-sized piece of silk worm gut into the lumen of the vas and up it as far as you can (about 8 to 12 inches) to see that there are no strictures of the vas to obstruct the solution. Then pass a fine silver tube, or needle, the point of which has been removed and end smoothly rounded, into the lumen of the vas and through this tube or needle; inject the solution intended for the treatment of ampulla, seminal vesicles and vas deferens. This vasotomy may be maintained as a vasostomy so long as useful, however, I believe if the 5 per cent. solution of Colargol in quantity of three or four c. c. is used there will be no further need for the vasostomy unless you are treating an acute condition. In chronic conditions I close up the incision and drop the vas back and close up the scrotum except for leaving in a small cigarette drain for several days.

Both sides are treated alike and generally done at the same sitting under a local anaesthetic (1 per cent. Novocain solution) injected into the scrotum. The strictest aseptic precautions should be used in doing this operation, as the scrotum is very hard to get clean and the main after trouble of this operation is the chance for infection of the scrotum. The object of this operation is to fill the ampulla and seminal vesicles full of the solution. As they will hold not less than three c. c., you may say: "How will we know when they are full?" We will know sure if we can get the patient to urinate, and most generally we will see the injected fluid coming from the meatus. If Colargol is used there will be black streaks in the urine for several weeks following the operation, and if the patient should have a nightly emission any time following within several months, he would think he was ruined, because the seminal fluid would be absolutely black.

The value of this operation has not been proven in cases where it has been complicated with an epididymitis, and in such cases I have my doubts if it will be of any value, especially so if there are any gonococci in the tubules, ductuli aberrantes, globus minor or body of the epididymis and globus major. However, this is seldom the case, as what few get into these portions are generally taken care of by Mother Nature. Of course this operation will not help a gonorrheal prostatitis, but that may be taken care of by the well-known treatment of massage of the prostate in conjunction with internal medication and the bacterin therapy.

THE TREATMENT OF BURNS WITH BICARBONATE OF SODA

By C. VON WEDEL, M. D., F. A. C. S., Oklahoma City, Okla.

In this discussion of the treatment of burns, we will discuss only that period which follows shock—namely, the period of toxæmia. There are three distinct periods following a severe burn: First, the immediate or period of shock; second, the period of absorption or acidosis; third, the period of sepsis. It is not the scope of this paper to take up the early or the ultimate treatment of burns. It has only to do with that most peculiar syndrome which follows whenever a large portion of the surface of the body has been burned.

The death rate from burns has three distinct causes: 1, shock; 2, acute toxæmia; 3, general sepsis. The cause of this toxic period of burns is uncertain.

Adamy states that there is liberated a toxin or enzyme, by the extreme cell destruction, which causes the intense congestion, coagulation, necrosis, and ulceration of mucous and serous surfaces so often found on autopsy. We know that at this period we have often an irritant acid diarrhoea, an acid vomit, and an intense congestion, if not total suppression, of the kidney. The examination of the excreta and normal serous fluid of the body will be found to be either increased in acidity or at least lessened in alkalinity. Knowing that the urine often contains diactic acid, etc., and that there is more or less general acidosis present, we have endeavored to retrieve this condition by overcoming this acidosis.

We know, likewise, that the surfaces of burned areas are acid in reaction—indeed it is the intensely acid condition which is the causative factor of much pain. In the alleviation, then, of this condition, we would use large amounts of alkaline media, and the most applicable is simple bicarbonate of soda. At the time of the burn we know that the area is sterile, and if we are able to keep this area reasonably sterile, we have to deal with but a simple raw surface. The application of a large dressing of sterile bicarbonate of soda paste is soothing, diminishes pain, and is mildly antiseptic. If we care to, we may add some mild disinfectant.

Considering, then, that the causative factor of the congestion, pain, acid diarrhoea and vomit, and urinary suppression, is acid enzyme or toxin, would it not seem reasonable that the giving of large amounts of bicarbonate of soda by mouth, by enema, and intra-venously, would be a great aid? The use of intra-venous saline to combat the shock is the old method. Salt is a severe kidney irritant. Consequently, in replacing salt by bicarbonate of soda, we not only do not irritate the kidney, but we neutralize the causative factor, the acid toxin or enzyme, and with the increased amount of water, we flush the kidneys—thus preventing one of the chief causes of mortality.

Our method of treatment, then, is as follows: The burned area is covered with a large paste of sterile bicarbonate of soda, kept moist, and renewed twice daily, and a drip enema of bicarbonate of soda. If there be shock, or a tendency to suppression, a hypodermoclysis or an infusion of isotonic bicarbonate of soda is given. Thus we have elimination forced. If a cathartic be given, magnesia sulphate, because of its mildly alkaline nature, is the one of choice.

If the burns be so severe as to make it difficult of handling the patient, I believe the immersion in a bath of bicarbonate of soda, with frequent changes, is the ideal method—especially is this true in the treatment of extensive burns of infants.

By the use of greases, caron oil, etc., we place a material upon an area which is already a good culture medium for infection, which easily becomes rancid, and adds only a dam preventing drainage, and increasing absorption.

HYDROTHERAPEUTICS IN GENERAL PRACTICE

C. W. JAMISON, M. D., Alva, Oklahoma.

The use of water as an agent for the treatment of disease is not a modern discovery. A glance at the history of the earlier peoples show that the use of the bath as a curative agent was of very remote origin. It is a matter of interest to note the use and estimation of the bath by various nations and tribes, civilized and barbarous, and regular and irregular physicians, from the remote ages of antiquity down to the present time.

The hydrotherapy of earlier years was, however, more or less empirically used, and was put on a scientific basis within the past 35 years by Dr. Winternitz of Germany, Drs. Curry and Jackson of England, Dr. Kellogg of the U. S., and many other equally distinguished physicians. The great temple of health in Battle Creek, Mich., deserves special mention as a sanitarium of world wide

reputation, built up by Dr. J. H. Kellogg, who made use of these principles, scientifically applied. These men by no means depend solely upon the water treatment, but they recognize in hydrotherapy a valuable adjunct to surgery, drug therapy, dietetics, massage and other dependable therapeutic agents.

Water becomes a valuable remedy because of its universal distribution, its effect as a diluent, by its solvent properties, and because of its wide range of temperature, presenting its several physical forms and various temperatures from ice to steam.

The general physiologic effects of water may be summed up as follows: the equalization of circulation, the regulation of the body temperature, relief of pain, removal of obstructions, to excite activity, dilution of the blood, general and special effect on the nervous system, its influence on metabolism (favoring anabolism or catabolism, as the physician may choose), its action as a solvent, and its effects as an eliminative and reconstructant. It is a sad mistake to suppose that any one can apply the water treatment as skillfully as the most experienced physician and that its successful use requires little or no knowledge of the structure and physiology of the human body. The popular error is that water being so simple a remedy "It will do no harm if it does no good." Without doubt, however, it is safer in the hands of the uneducated than many of our drugs, nevertheless the ignorant or careless application of the water treatment has frequently led to very disastrous results.

I am firmly convinced that the more scientific knowledge of physiology and the physiological effects of water the user has the more skillfully and successfully will he be able to apply it. I call to mind some experiences in ill-applied hydrotherapy related by Dr. Kellogg:

"In a case of low typhus fever a regular physician ordered the patient, a young woman, to be immersed in cold water for half an hour. The attendants attempted to carry out this prescription, but in a few moments her symptoms became so alarming that the patient was removed from the bath. It will not be considered remarkable that the patient died."

Another report. "A prominent New York physician, a professor of practice in one of the large medical colleges in America, in a report of a case of remittent fever which he had treated with water said that he had administered 35 cold packs in a week, the patient died, but the doctor thought that if he had been more thorough in his treatment, giving more treatments and longer ones, he would have lived."

Another professor of a rival college in the same city cited in a public lecture a case of pneumonia which was treated hydrotherapeutically by a regular physician of note. The patient, while very feeble, was placed in a cold bath, he was taken out shivering and died an hour afterwards. The doctor's conclusion was that water was a very hazardous remedy. I feel that I quite agree with him if the example given was the correct use of water.

For reason of the heroic procedures which have been cited, patients are often brought into a condition similar to that produced by the old process of depletion by bleeding, by antimony, mercury and purgatives, painful skin eruptions, boils and carbuncles often covered the body, and patients suffered acute pains from head to foot. If the patient passed over this crisis, he usually recovered, which was regarded as an evidence of the salutary effect of the crisis. And so it became an important object to be obtained. The worse a patient felt the more certain and speedy would be his recovery. The *modus operandi* of the various hydrotic procedures may be found in the chapter on "Practical Application" in Kellogg's *Practice of Hydrotherapy*.

Let us now consider the application of the water treatment in the diseases and conditions where same is especially indicated. In the case of typhoid fever and other fevers, the water treatment plays an important part in the reduction of the temperature. The cool bath is most generally used in the form of the wet

hand rub, cold mitten friction, wet sheet pack, bran bath or immersion bath and other variations of the cold bath where they may be indicated to meet the requirements of the cases under treatment.

In the case of a robust patient with a good vital resistance, as in the early days of the fever, the more heroic procedure may be administered. In a patient of low vital resistance a *very gentle* application of the cold must be used to obtain satisfactory results. A wet hand rub may be used, at a temperature of 70 or possibly 60, taking only a part of the body at a time, drying each part thoroughly before proceeding farther. A condition very often met in fever patients where the internal temperature is high and the skin less warm and subject to chill from the least exposure, warm or hot water must be used. This is applied by the hand of the applicator leaving drops of water on the skin. The effect here is the hot application drawing the heat to the surface and the evaporation of the drops left on the skin causing the decrease in temperature. In administering cold baths to fever patients who do not react promptly friction must be given, simultaneously with the cold applications. For this purpose use a mit made of marine cloth or turkish toweling. Too much friction must be avoided else more heat will be imparted to the patient instead of being radiated.

In cases of tachycardia of any cause, the application of prolonged cold to the heart will lower the pulse beat from ten to thirty beats or more within 15 to 30 minutes. One thing to be remembered in the use of hot and cold applications is that the primary effect of cold is a stimulant, but a prolonged cold is a depressant, the primary effect of heat is a stimulant, but a prolonged heat is a depressant, while a hot and cold, alternating, is a tonic.

Hydrotherapy in the treatment of malarial diseases gives very prompt and satisfactory results. During the chill, a hot blanket pack with a cold compress to the head and a cold compress to the heart, if indicated. Remove the patient from the pack, after the fever comes on, with a cold mitten friction or whatever cold treatment is indicated. Dry the patient thoroughly and put him to bed, keeping a warm application to the feet and a cold compress to the head. This treatment repeated as often as justifiable, keeping the bowels open by appropriate enemas, encourage free water drinking, and the treatment is complete.

I encourage free water drinking in all cases except when the stomach is unable to retain anything at all, then water is temporarily withheld. However, the general rule is, water externally, internally, eternally. The term water (as here used) does not include gyp water, Red river water, etc., but pure cold water. Pure water as a beverage is indispensable in health and in disease. Persons have been known to go long periods without food when plenty of good water was available. Cato, an old Roman physician, used to cure constipation by ordering a glass of cool water on rising in the morning and an exclusive ripe apple meal for supper. As above referred to, free water drinking in fever cases is not only essential as a curative agent but is a great comfort to the patient. In chronic constipation the graduated enema is a very effective treatment. A two-quart enema at a temperature of 105 to 108 degrees is given and is each day repeated, gradually lowering the temperature and decreasing the amount of water until the bowels are moving without the assistance of the enema.

In appendicitis, a hot hip and leg pack with an ice bag over the appendix, supplementing this treatment with high oil enemas, is the water part of the treatment in this condition.

In obstetrical practice, water becomes a life saver in post partum hemorrhage. A douche at 120 degrees will, with few exceptions, arrest the hemorrhage.

In surgery, especially abdominal, the uses and necessary effects of the hot sponges are quite generally known by all operators. The lavage, or gastric douche, is a very welcome aid in the treatment of stomach troubles, both acute and chronic. It being useful when necessary to empty the stomach because of pyloric strictures, slow motility, pronounced hyperacidity, and as the primary treatment of alcoholic

gastritis. In gastric inflammation, the salutary effects of the hot and cold douche are very gratifying. The hot and cold stomach douche as a routine in the treatment of chronic catarrhal gastritis has found great favor. In the early stages of pneumonia, fomentations to the chest with a hot foot bath, excites activity of the lung tissues without depression. In the later stages of the disease, the alternation of heat and ice promotes elimination and reconstruction.

The sedative effect of fomentations to the spine in treatment of insomnia and neurasthenia, hysteria, and other nervous conditions is very gratifying. As one reflex area of the brain is in the soles of the feet, a hot foot bath with a cold compress to the head at the same time is a very effective sedative in mental and nervous diseases and in congestion of the brain.

In the treatment of rheumatism, lumbago, gout, and similar affections, the use of the various applications of hot and cold give very pleasing results. Patients are drawn to the various watering places for these troubles because of the written analysis of the water there abounding. But the dependable virtues of the water are not so much vested in their containing so much iron, manganese, sodium chloride, etc., but in the hot and cold properties of the water.

Hydrotherapy's most extensive use is in the treatment of chronics. And here, as in other conditions, its effects are very pleasing indeed. The Lord made man and furnished with him a repair outfit. The repair outfit consists of white blood corpuscles, in greater or lesser numbers, according as we are blessed. The treatment in chronic cases outside of the special procedures to meet special conditions is directed toward keeping the secretory and excretory organs in operation, to building up and increasing the number of white blood corpuscles, and the proper distribution of the blood.

For example, as to how results are obtained by this principle, consider the treatment of a flesh wound: The leukocytes have three functions to perform. 1st. They carry waste products away. 2nd. They carry nourishment to the tissues. 3rd. They actually attack germs and absorb them. In the treatment of a wound, a fomentation or any suitable hot application is applied, which causes the blood and lymph vessels to relax and dilate. When dilated they hold more blood, and if there is a larger volume of blood there are more leukocytes present and the rest is left to the leukocytes. These various results are accomplished by the direct application or through the various reflex areas on the skin.

Pain is usually dependent upon disturbances of the circulation, being caused by the pressure of over-filled vessels upon the nerves in confined space. Pain may be relieved by either hot or cold applications. The first object should be to remove the surplus blood by local cold applications and remote hot ones. If this plan is not successful relief will be obtained by a local hot application, which operates by relaxing the surrounding tissues so that the nerve fibers are relieved from pressure as well as by quickening the local circulation and so relieving congestion.

Local baths, such as fomentations, abdominal compresses, foot baths, and sitz-baths, should not be taken under one hour after a meal. A full hot bath should not be taken under two or three hours after a meal. Always use a thermometer to determine the temperature of baths wherever the temperature is an important feature.

The temperature of the treatment room should be from 70 to 85 degrees, a warmer room for patients of low vitality. Never give a cold bath to anyone in a cold room. It is important to see to it that a patient re-acts to all cold applications, else results will not be forthcoming. Always follow a general hot bath by a short cold application; contrary to general public opinion a considerable degree of heat is the best preparation for taking cold. Cold baths should not be administered during the period of menstruation, avoid giving "shocks" to nervous people, patients with valvular lesions of the heart, or organic kidney trouble.

PROSTATECTOMY, REPORT OF TWO CASES

F. L. WATSON, McAlester, Okla.

After coming in contact with the two cases reported below, and realizing that one of them had been "passed along" to Florida and back, it became forcibly impressed upon me that surely here truly is a neglected field, and I wondered how many of these old men were simply "passed along" under first one pretext and then another to a premature and untimely grave. I had expected to report these two cases, but as is so often the case with our profession, procrastinated from day to day, and but for the whip to my conscience by Dr. Blesh's excellent paper, in the March issue of our *Journal*, should doubtless yet be consoling myself with the thought—"I'll do it tomorrow."

As Dr. Blesh has so truly said (given a good technique), those of these cases which are operable, and they must be separated by careful and painstaking examination, should afford a very low mortality, in the hands even of the general surgeon who knows well his anatomy, whose technique is clean and whose judgment about when to operate sound, and whose *after care painstaking*, as against an inevitable 100 per cent. mortality, neglected, catheterized. Too much emphasis can not be placed on the after care of these patients, of which detail would be too lengthy; sufficient being to say that it depends on good judgment in each individual case and of course extreme asepsis.

I do not know of any place in surgery where out of such clouded skies, and perturbed conditions, may be derived such rays of sunshine and such placid happiness.

I would not be doing my full duty to my profession if, before reporting these cases, I did not give full credit and thanks to Dr. G. Shearman Peterkin of Seattle, Washington, who so kindly mailed me copy of his article "Suprapubic Prostatectomy Simplified," as it appeared in *Surgery, Gynecology and Obstetrics*, for July, 1915, and whose technique with few individual exceptions, being closely followed.

In reporting the following cases the idea uppermost in my mind is that this report may perchance fall under the eyes of some one who did not see Dr. Peterkin's excellent article above referred to, or Dr. Blesh's most impressive paper in our own March *Journal*; and may it, like theirs, affect some one as did the first mentioned innervate me to exercise the courage of my convictions, and try to afford relief to the two old suffering gentlemen reported below, which, thanks to the excellent co-operation of the staff of All Saints Hospital, I was enabled to do to a completeness which is perfect.

Case 1. Mr. P.—Referred by Dr. Pemberton, McAlester, Okla., Oct. 21, 1915. Age 67, condition complete retention, catheter twice. Diagnosis, adenomatous prostatic hypertrophy simple. Admitted to All Saints Hospital evening Oct. 21. Urinary examination: Practically negative; slight amount albumen. Bladder irrigated, sat, sol. boric acid. Operated afternoon Oct. 23; convalescence uninterrupted. Up walking around 5th day. Went home November 12, 1915, sound and well and is now in first-class condition. As he told me yesterday working on farm, making full hand every day.

Case 2. Mr. D.—77 years, retired druggist; referred by Dr. Grubbs, North McAlester. "Uncle Bert," who got to be the pet of the hospital, did not have so tranquil a course as case one. He had complete retention, residual urine, had been on catheter at periods for two years, symptoms uremia, general edema, bronchitis, et al. symptoms. On admission to hospital on Nov. 20, 1915, when we did a suprapubic cystotomy, followed by boric acid irrigations, nursing him along until Dec. 28th, when his urine showed only a slight trace of albumen, suprapubic sinus closed. At this time we did a suprapubic prostatectomy under light ether anesthesia, and he was discharged sound and well on Feb. 16th, with the exception of slight urinary fistulae, which I learned has since closed.

This old gentleman has celebrated his 78th anniversary since his dismissal from the hospital, is bright mentally, cheerful, and gets about everywhere. When he first came under our care the prognosis was a speedy funeral, but by painstaking care he has been spared a while longer to his many friends, who are legion, and who rejoice with him.

That this hastily written report, though absolutely truthful, may convey a like blessing to some other or many sufferers, and with no ulterior motive, is the sincere wish of the author.

PROCEEDINGS OF ST. ANTHONY'S CLINICAL SOCIETY

Feb. 28, 1916.

Dr. D. D. McHenry, President.

Dr. L. J. Moorman, Sec'y.

ALBUMINURIC RETINITIS OF PREGNANCY WITH SECONDARY CHANGES:

Dr. L. M. Westfall presented a woman 35 years of age with the following history:

Eight years ago when in the eighth month of pregnancy she was taken suddenly ill with convulsions; prior to this she had been feeling perfectly well, with no swelling of ankles or eyelids. The urine had not been examined. The patient was unconscious until physicians were called and pregnancy terminated. This was followed by a rapid recovery. She complained of double vision for a while, but soon regained the normal use of eyes and remained in good health until three weeks ago when she was delivered of an eight months baby after a very short and easy labor. Her health had been considered good during pregnancy but the lower extremities were oedematous during the last six weeks and the lower lids puffy. During this six weeks the kidneys acted freely and there was no albumin in the urine, but there was a blurring of vision which was attributed to too much fancy work. About a week after labor there was a noticeable impairment of vision. At present the right eye shows 20-50 and the left 20-100, and the urine is loaded with albumin. For one day after labor many objects seemed to be green, especially those of blue color. There was no distortion of images; while vision in the left eye is worse than in the right, the ophthalmoscopic appearance is very similar. In the macular region are to be found white spots, irregular in shape and arrangement. In this region especially, one sees the typical star or stellate figure, which is so characteristic. Over the whole eye ground, both regular and irregular, white spots are seen, but more especially on temporal side of nerve head. An occasional hemorrhagic point is seen, either as a small dot or having the so-called flame shape. The veins are swollen and rather tortuous. The arteries are not materially changed in size, perhaps smaller than normal. Numerous vessels are seen disappearing beneath the infiltration to re-appear at some distance beyond. The nerve head is hyperemic and perhaps slightly swollen. The edges of the nerve head are blurred and rather indistinct. The only subjective symptom of this condition is a blurring of the vision.

The pathologic changes are more pronounced in the region of the macula and around the nerve head. The glistening white spots are due to fatty degeneration of the exudates and retinal elements. The white spots are distinguished from choroidal atrophy by absence of pigment heaping.

The prognosis in albuminuric retinitis of pregnancy ordinarily depends upon the duration of pregnancy after the process begins. Upon the termination of pregnancy the inflammatory process subsides and good vision may be regained provided secondary changes have not taken place. In this case the prognosis is bad.

Discussion: Dr. E. S. Ferguson thinks that this condition is one of long standing, and it had not been discovered because the eye had not been examined. He agrees with Dr. Westfall in regard to prognosis, as the extensive formation of scar tissue renders improvement improbable.



THE ONLY LIVING QUADRUPLLET GIRLS IN THE WORLD ✓



Dr. W. C. Pendergraft, Superintendent of Health for Harmon County, Hollis, Oklahoma, reports to the *Journal* the interesting and unusual case of female quadruplets here pictured as being the only existing phenomena of that class. They were born to Mrs. F. M. Keys, of Hollis, and at birth weighed 3 and 3-4, 4, 4 and 1-4 and 4 and 1-2 pounds respectively; date of birth June 4, 1915. At the seventh month after birth, they weighed 14 and 1-2 to 16 pounds each, and all were perfectly developed and healthy. The mother is a strong woman, weighing about 150 pounds, and the infants are breast fed.

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DR. CLAUDE A. THOMPSON, EDITOR-IN-CHIEF

ENTERED AT THE POSTOFFICE AT MUSKOGEE, OKLAHOMA AS SECOND CLASS MAIL MATTER, JULY 26, 1912

THIS IS THE OFFICIAL JOURNAL OF THE OKLAHOMA STATE MEDICAL ASSOCIATION. ALL COMMUNICATIONS SHOULD BE ADDRESSED TO THE JOURNAL OF THE OKLAHOMA STATE MEDICAL ASSOCIATION, BARNES BUILDING, MUSKOGEE, OKLAHOMA.

The editorial department is not responsible for the opinions expressed in the original articles of contributors.

Reprints of original articles will be supplied at actual cost, provided request for them is attached to manuscript or made in sufficient time before publication.

Articles sent this Journal for publication and all those read at the annual meetings of the State Association are the sole property of this Journal. The Journal relies on each individual contributor's strict adherence to this well-known rule of medical journalism. In the event an article sent this Journal for publication is published before appearance in the Journal, the manuscript will be returned to the writer.

Failure to receive the Journal should call for immediate notification of the editor, 507 Barnes Building, Muskogee, Okla.

Local news of possible interest to the medical profession, notes on removals, changes in address, deaths and weddings will be gratefully received.

Advertising of articles, drugs or compounds not approved by the Council on Pharmacy of the A. M. A. will not be accepted.

Advertising rates will be supplied on application. It is suggested that wherever possible members of the State Association should patronize our advertisers in preference to others as a matter of fair reciprocity.

EDITORIAL**INVESTIGATION OF OKLAHOMA'S MENTALLY UNFIT**

The locking up of sick men suffering from apoplexy, meningitis, and various types of nervous and mental diseases by our police officers on the theory that they are drunk is probably excusable on the ground that it is impossible for untrained men to differentiate the conditions in every instance. Not long ago the City Railway of New York hauled an unconscious man around for five hours; in the goodness of his heart the conductor thought he "was just full" and, knowing his passenger would be locked up if put off the car, allowed him to stay on until death, when it developed that he had apoplexy. Beyond urging every possible precaution capable of being followed by the layman, it seems we can hardly go further in these rare cases.

However, there is one class of cases that is not given the humane consideration that the theory of the law intends they should receive. Virtually no provision is made for the care of the unfortunate who suddenly loses his mind beyond yanking him before a county court where his future is sagely decided by one physician, more or less competent, as the case may be; the county judge, qualified by the votes of an intelligent people to pass on the problems of the alienist, and a third person selected by the judge. The judge, it should be noted in passing, appoints both his fellow jurors. It should be appreciated that the human mind is a delicately adjusted matter, often influenced disastrously at certain critical times and conditions by very slight influences and with this in mind the judges of the final probabilities in a case should certainly not be a county judge and a lawyer or other person untrained in weighing such affairs.

The sensible thing to do would be to consider the person what he is, a sick person; and his problems should be placed in the hands of people who have to do with sick persons, physicians. When such a jury of physicians certify that the person is insane, then the court might inquire as to the probability of cure and duration of the disease and should have the power to order the person under proper surveillance and treatment until a certainty is reached. These propositions are not combatted by either the lawyer or physician.

The system of appointing the county sanity boards is not the best by any means. The least improvement we could make to the system is to make the board one entirely of physicians and make their recommendations mandatory so far as the court is concerned.

TYPHOID AN ACCIDENT

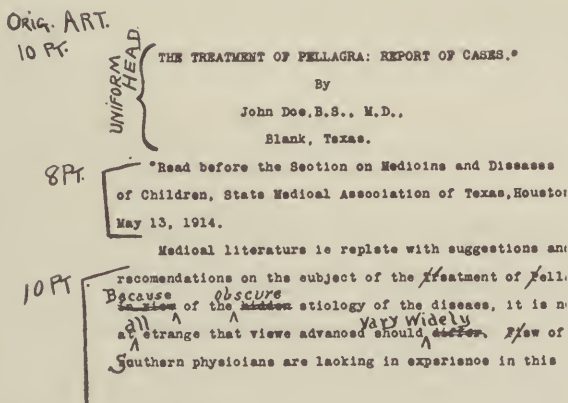
The Supreme Court of Wisconsin recently decided that a case of typhoid fever resulting from an employee drinking impure water furnished by the employer was an "accident" and on such grounds the employee was entitled to compensation under the terms of the Wisconsin Workmen's Compensation Act.

We are glad to note that courts are more inclined to take cognizance of the preventibility of certain types of disease. It foreshadows the light of a better day all along the line. Sooner or later there is going to be a clash of reason and unreason, sanity and insanity in this land of liberty and license and our common sense is going to prevail to the extent that we will see many of our shams built upon the insecure foundations of ignorance and greed stripped of their covering and relegated to the place where all such should be.

The phenomena incident to typhoid is due to more than the bacillus of Eberth. It is wonderfully accelerated in its destructive course by the common, dirty back yard, the unscreened manure pile, the ignorant or careless householder, the indifferent and callous physician who is not "My brother's keeper;" it is hastened along its remarkably unnecessary course by the habit of one little municipality polluting its stream with sewage and filth for the nourishment of its neighbors further down, and the neighbor getting even by repeating the performance. The reign of reason will soon cause them both to use every effort to protect all classes of people and typhoid will be properly placed in its proper category as due to carelessness or ignorance.

ABOUT YOUR PAPER, DOCTOR

The Oklahoma State Medical Association is indebted to the Texas State Journal of Medicine for the suggestion embodied in the cuts appended here below. The first cut indicates how your article should be:



This one how it should not be:

The Treatment of Pellagra With Report of Cases.

Medical literature is replete with suggestions and recommendations on the subject of the Treatment of Pellagra. In view of the hidden etiology of the disease, it is not at all strange that views advanced should vary widely. Few of our southern physicians are lacking in experience in this unsate disease, and opinions vary as widely in the matter of treatment. The plans of treatment themselves vary. Should a patient improve on arsenic, we are inclined to believe in arsenic. Repeat results a time and we are committed to arsenic. And so it is with any other

We have had occasion heretofore to call the attention of contributors to the immense amount of unnecessary work entailed by careless preparation of papers. We do not intimate that a man who writes a paper is ashamed to put his name on it, but it is a fact that decidedly more than half are lacking in that respect. In one instance it took several months to find out who wrote a paper found among the annual reports. We trust that the suggestions here given will not be taken as personal, but as a request for co-operation in making our Journal better.

PERSONAL AND GENERAL NEWS

Dr. W. M. Browning, Waurika, has moved to Wetumka.

Dr. W. H. Langston, Guymon, spent a part of the winter in Florida.

Dr. J. J. Clark, Milburn, announces his candidacy for the State Senate.

Dr. F. L. Wormington, Miami, has returned from New Orleans clinics.

Dr. O. E. Templin, Alva, has been appointed registrar for Woods county.

Dr. W. D. Faust, Ada, has returned from postgraduate work in New Orleans.

Dr. C. M. Maupin, Waurika, is suffering from an injury to his leg due to a fall.

Drs. J. H. Scott and G. S. Baxter, Shawnee, attended the Chicago clinics in April.

Dr. E. W. Van Brunt, Watonga, has been appointed health officer of Blaine county.

Drs. Chas. Blickensderfer and G. H. Applewhite, Shawnee, have formed a partnership.

Dr. J. E. Hughes and F. L. Carson, Shawnee, have returned from the New Orleans clinics.

Dr. Walter Penquite, who has been ill for many months, has been reported as slightly improved.

Bartlesville physicians have gone after the fakes in their city by filing complaint with the county attorney.

The Pottawatomie County Medical Society are planning to attend the Oklahoma City meeting in a body.

Dr. S. E. Mitchell, Stigler, has announced that he will confine his work to eye, ear, nose and throat hereafter.

Drs. Wm. B. Newton and F. S. King, Muskogee, have formed a partnership for eye, ear, nose and throat work.

Dr. J. W. Bone, Sapulpa, who has been seriously ill for some time, continues in a low state and his recovery is doubted.

Dr. R. L. Koons, El Reno, recently lost his automobile by theft. The machine was later recovered in Oklahoma City.

Dr. T. A. Hartgraves, of Soper, and Miss Mayme Herring, Garrett's Bluff, Texas, were married in Paris, Texas, March 21st.

Dr. H. H. Wilson, Shawnee, will attend the New York eye clinics in April and May. He will be accompanied by his family.

Shawnee Hospital Association are planning additional equipment and buildings for their hospital, present facilities being inadequate.

Miami, it is said, will begin the erection of a modern hospital soon, to be under the management of Dr. W. W. Jackson of Vinita.

Dr. C. W. Bacon, Yale, has joined the victims of the Ford, recently sustaining a compound fracture of both bones of right forearm.

Dr. M. D. Looney, Burneyville, who was seriously injured some time ago when his horse fell on him, is improved enough to be about.

Dr. H. H. Wynne, Oklahoma City, visited the clinics of the eye, ear and throat hospitals of New York, Baltimore and Philadelphia during April and May.

Dr. W. E. Dicken, Oklahoma City, easily won a \$25,000 suit for damages in the District Court of Oklahoma County. The jury promptly decided that the matter was not the fault of the doctor.

The Suit of Chattanooga Medicine Co. against Dr. Oscar L. Dowling for libeling the virtues of that woman's paragon, "Wine of Cardui," was brought to a sudden termination in that city on account of the illness of a juror.

Dr. W. A. Thompson has moved from Achille to Kusa.

Dr. Claude E. Putnam has moved from Eakley to Harrah.

Dr. Z. J. Clark, Cherokee, spent April in the Chicago clinics.

Dr. Walter Penquite, Chickasha, is in San Angelo, Tex., for his health.

Dr. G. A. Boyle, Enid, suffered a small loss by robbery of his office recently.

Dr. J. I. Gaston, Madill, is serving a six months "term" in the Dallas hospitals.

Drs. W. M. Hunter and Cecil Bryan, Vian, have established a hospital in that town.

Drs. A. R. Holmes and N. N. Simpson, Henryetta, are doing postgraduate work in New Orleans.

Dr. J. E. Farber, Cordell, has returned from an extensive trip to the southern states and Cuba.

Dr. J. L. Jeffress, Roff, who was accompanied by his daughter, has returned from New Orleans.

Drs. Brown W. and Harvey O. Randel, Muskogee, have located in Tulsa and Okmulgee, respectively.

Dr. Howard Weber, Bartlesville, was honored by his selection as one of the delegates-at-large to the Democratic National Convention.

Dr. John W. Duke, Guthrie, was also selected as a delegate from his Congressional District to the Democratic National Convention.

Dr. Ed. D. Meeker, one of Lawton's leading physicians for many years, died from paralysis in that city after a few hours illness April 4th. Dr. Meeker was 50 years of age.

Dr. Hugh Scott, formerly of Guthrie, a Major in the Oklahoma National Guard, lately attached to the United States Medical Reserve Corps, is in Mexico with the forces at Casas Grandes.

Dr. R. Mooney, Henryetta, has developed into a "catchemalive" citizen. Recently he tackled a supposed burglar in his dining room, threw him and sat upon him until the officers arrived. It was discovered the burglar was suffering from mental derangement.

Dr. Charles Zieman, Oklahoma City, has been arrested on the charge by County Health Officer Davenport that by performing a criminal operation he caused the death of Marie Fisher. Filing of false certificate of death is also included in the charge. Zieman made bond for \$5,000.00

Dr. E. M. Miller, health officer of Harper county, who has been having troubles in both county and district courts, scored a good inning recently when the case against him was thrown out, the court taxing the costs in both instances against the county. It is said the jealousy of the county attorney prompted the prosecutions.

Dr. O. C. Hood, Tulsa, was arrested April 13 by the U. S. authorities and placed under bond of \$1000 on the charge of selling drugs in violation of the Harrison Law. It is said that Dr. Hood has been selling about sixty grains of morphine a day in his office without keeping a record of the names and addresses of the purchasers.

The American National Red Cross was organized in Oklahoma City April 13th. S. P. Morris of Denver was the Organizer. The officers elected were: Chairman, Harry Pentecost; vice-chairman, Sydney L. Brock; secretary, Thomas E. Braniff; treasurer, Joe Hucksins, Jr. The Executive Committee is Governor R. L. Williams, Mayor Ed. Overholser and Anton H. Classen.

Chandler Physicians are out in a signed statement to the public deploring the act and expressing their contempt for some person in the profession of Chandler who performed a criminal operation which resulted in the death of Juanita Keefe. They call on the people and officers to co-operate in removing any stigma wrongly attached to them and assert their purpose is to conserve life rather than destroy it.

Dr. Theodore Sachs, father of the Chicago tuberculosis hospital, recently committed suicide in that city, due it is said to criticism of his acts in opposing graft and political interference with the management of the institution. He left a note reading, in part: "No institution was ever planned more painstakingly, or built more honestly. Every penny of the people's money is in the buildings, equipment and organization. . . . I am just tired."

Dr. W. L. Short, investigator for the State Commissioner of Health, deduces from an examination of 4000 school children in Washita, Kiowa and Roger Mills counties that 15 per cent. were troubled with defective eyesight; 12 per cent. defective hearing; 25 per cent. nasal trouble and 35 per cent. bad teeth. He estimates that in some localities the rate of infected children is as high as 60 to 65 per cent., but that less than 2 per cent. are incurable if taken in time.

"Dr." David B. Teem, a chiropractor, who it will be remembered while formerly living in Hugo contracted smallpox from his partner, who died from the disease, and who was arrested for not reporting the infection to the health authorities, has just reappeared in the limelight, this time at the most central point of the focused rays; he is charged with murder in Grayson County, Texas, in that he "beat, pummelled, mauled" and we presume "adjusted" one of his patients until death intervened.

Dr. James Crouch, Oklahoma City, was recently convicted in that county for performing a criminal operation from which the patient died and he was sentenced to ten years in the penitentiary. It is said that a new trial will be asked for. It is charged that during the trial at which he was convicted, another victim of the physician's was at the point of death at an Oklahoma City hospital. Several women, upon whom, it is alleged, he had performed criminal operations, appeared as witnesses against him.

Mrs. J. C. Mahr, wife of Dr. J. C. Mahr, Oklahoma City, died Tuesday, March 23, after a short illness.

Mrs. Mahr was born in Indiana and was 46 years, 8 months old at the time of her death. She and Dr. Mahr were married 26 years ago, and she is survived by Dr. Mahr and one son, John Fair Mahr. Throughout the many years of arduous official service rendered by Dr. Mahr as State Commissioner of Health, Mrs. Mahr was his constant aid and advisor, and she was probably personally acquainted with a larger number of physicians than any woman in Oklahoma. Her knowledge of medical laws and medical legislation, the standing of various legislators on questions of public policy affecting public health matters and the practice of medicine was very great.

The *Journal* takes this occasion to extend to Dr. Mahr on behalf of the Oklahoma physicians, its sincerest sympathies in his bereavement.

COUNTY SOCIETIES.

Atoka County Society elected for 1916: President C. C. Gardner; secretary M. Pinson, Atoka.

McIntosh County: Program for April 4. "Tuberculosis of the Bone," A. B. Montgomery, Checotah. Clinic on Tuberculosis. Meeting held at Checotah.

Muskogee County Medical Society met March 27. The paper of the evening was "Belfield's Vasotomy and Vasostomy," by Dr. Brown W. Randel, discussed by Drs. Waterfield, White and others.

Canadian County had a meeting scheduled for April 6, to which the general public was invited. Dr. G. W. Taylor, county superintendent of health, read a paper on "Ice and Its Relation to Infectious Diseases."

Harmon County elected: President, W. T. Ray, Gould; vice-president, W. C. Pendergraft, Hollis; secretary-treasurer, J. W. Scarborough, Gould; censors, E. C. Collins, Louis, J. S. McFaddin, Hollis, E. S. Kirpatrick, Vinson.

Haskell County Society elected officers for 1916 as follows: President, S. E. Mitchell; vice-president, T. B. Turner, Stigler; secretary treasurer, R. R. Culbertson, Hoyt; censors, John Davis and R. F. Terrell, Stigler; delegate, R. F. Terrell.

Washita County held a meeting in Cordell April 5th, which was jointly attended by the Dental Profession. Dr. H. H. Lane, Oklahoma University, delivered a lecture in the evening on "Heredity." After the program of the meeting a banquet was enjoyed, nearly one hundred guests being present, to be precise 99.

The Marshall County Medical Society met April 4th in Madill and the following program was reported: "Acute Indigestion in Nursing Infants," Dr. G. H. Funk, Madill; "Acute Indigestion in Adults," Dr. J. A. Rutledge, Woodville; "Acute Colitis," Dr. W. L. Davis, Kingston; "Acute Gastro-Enterocolitis," Dr. T. A. Blaylock, Madill.

Kiowa County Medical Society announces the following program for April 14th: Dr. J. W. Duke, State Commissioner of Health, is down for an address on "What the Public Should Know About Tuberculosis." "Conservation of Vision," Dr. Edward F. Davis, Oklahoma City. An additional feature of the meeting is a literary program being arranged by the Yamparika Club of Hobart.

Northeastern Oklahoma Medical Society met in Tulsa April 4th. About fifty physicians attended. The program announced follows: Address of Welcome, Horace Speed, Tulsa; response, W. A. Howard, Chelsea; president's address, "The Significance of Blood Findings in Acute Infectious Diseases," C. E. Hamner, Tulsa; "Acute Appendicitis, Treatment and Mistreatment," Roscoe Walker, Pawhuska; "Thoracic Empyema," C. S. Neer, Vinita; "Fractures," Carl Puckett, Pryor; "A Doctor's Recollections," Wm. Nairn, Nowata. The meeting was thoroughly enthusiastic and the members were repaid by hearing a good program.

Pittsburgh County held its annual banquet in McAlester, March 18. "Acute and Sub-Acute Metastases" was a paper read by Dr. A. L. Blesh. "Some Phases of Hookworm Disease," Dr. Murrell Pinson, Atoka. Immediately after the scientific program a banquet was served, to which each one did ample justice. Following the banquet the following program of toasts was carried out, with Dr. T. H. McCarley as toastmaster: "The County Medical Society," Dr. J. E. Davis. "The State Medical Society," Dr. J. Hutchings White. "The Doctor Before the 'Bar,'" Hon. Jas. H. Gordon. "The Doctor's Credit," Hon. Wm. P. Freeman. "Oklahoma," Dr. F. L. Watson. "To My 'Tin Lizzie,'" Dr. R. K. Pemberton. The banquet committee was composed of Drs. L. S. Willour, L. C. Kuyrkendall and M. H. Foster. Those attending were, from McAlester: F. L. Watson, W. C. Graves, R. K. Pemberton, V. H. Barton, J. A. Smith, L. C. Kuyrkendall, W. C. Wait, L. S. Willour, H. S. Holmes, J. W. Echols, E. Davis, T. J. Palmer, T. H. McCarley, Graham Street, McClelland Wilson,

Geo. A. Kilpatrick, A. J. Welch; R. A. Munn, C. A. Johnson, Kiowa; R. L. Browning, Dow; C. J. Brunson Adamson; M. H. Foster, O. W. Rice, Alderson; H. N. Bussey, Pittsburg; T. T. Norris, Crowder; Ed. D. James, Haileyville; G. S. Turner, Krebs; J. P. Nelson, Hartshorne; F. J. Baum, Savanna; A. L. Blesh, Oklahoma City; Murrell Pinson, Atoka; J. Hutchings White, Muskogee; Hon. Wm. P. Freeman, Hon. Jas. H. Gordon.

OKLAHOMA CENTRAL MEDICAL ASSOCIATION

L. W. Cotton, President,

L. F. Watson, Secretary

Program of the spring meeting held in Oklahoma City, Tuesday, April 11, 1916.

E. S. Lain, Oklahoma City. Latest methods of diagnosis and treatment of some common skin diseases. (Latern slides.) *Abstr*—Importance of correct diagnosis, diseases most likely to be confused. Systemic and local treatment. Recent advances Clinical cases.

L. J. Moorman, Oklahoma City. Method of making an early diagnosis in tuberculosis. *Abstr*—Clinical case illustrating exact method of making the examination. Importance of recognizing disease before tubercle bacilli are found in the sputum. Prognosis favorable in this stage.

R. G. Bolend, Oklahoma City. The newer methods for the treatment of gonorrhea. *Abstr*—The value of different drugs, systemic and local. How to successfully abort the average case. Complications and their treatment.

C. R. Day, Oklahoma City. The newest test for syphilis—the Walker-Klein urine test. *Abstr*—This method checks up with the Wasserman. In experienced hands can be performed in a few minutes. Makes possible the examination of a large number of suspected patients. The principles underlying the test and its application in other diseases and as a test for pregnancy.

C. J. Fishman, Oklahoma City. Early diagnosis and treatment of ulcer of the stomach. *Abstr*—Frequency of the condition. Relation to cancer. Conditions to be excluded. Method of making the examination. Essentials for successful treatment. (Illustrative cases.)

Le Roy Long, Oklahoma City. Early diagnosis and surgical treatment of perforated duodenal ulcer. *Abstr*—Unusual symptoms. Case report with early operation and recovery. Advantages of immediate operation. Prognosis and mortality of neglected cases.

R. L. Hull, Oklahoma City. Diagnosis and treatment of fracture of the neck of the femur. *Abstr*—Method of making diagnosis. The best treatment and results. (Illustrative cases.)

C. Von Wedel, Oklahoma City. Indications for operation in acute cranial injuries. *Abstr*—Difficulty of making diagnosis. Conditions to be excluded. Treatment and prognosis. Specimens of brains to illustrate points brought out.

G. F. Border, Mangum. Unusual symptoms of aortic aneurysm. *Abstr*—Difficulties of making diagnosis. Prognosis and treatment.

D. Garrett, Altus. Solid tumors of the ovary. *Abstr*—Methods of making diagnosis. Conditions to be differentiated. Treatment.

L. H. Huifmann, Hobart. Treatment of pellagra. *Abstr*—Importance of early diagnosis. Methods of treatment and prognosis. Report of cured case.

Dr. Gooch, Lawton. Treatment of chronic duodenal ulcer. *Abstr*—Method of making diagnosis. Prognosis and methods of treatment.

H. Reed, Oklahoma City. Newer tests of kidney efficiency. *Abstr*—Present methods generally realized to be unsatisfactory. Importance of blood pressure. Functional capacity only true index of the condition of kidneys.

O. R. Gregg, Alva. Epilepsy from a gynecological standpoint. *Abstr*—Recent advances made in the study of epilepsy. Close relationship existing between the brain and the pelvic organs. Results following treatment by correction of the pelvic disease.

L. A. Riely, Oklahoma City. The Allen treatment for diabetes. *Abstr*—Indications for treatment. Radical departure from the old form of treatment. Promising results that have followed this new method.

J. S. Hartford, Oklahoma City. The diagnosis and pathology of salpingitis. *Abstr*—Specimens illustrating the different types of infection of the uterine adnexa. Prognosis and treatment.

A. L. Blesh, Oklahoma City. An improved operation for perineal laceration. *Abstr*—Latern slide demonstration of the steps necessary to secure the best results in perineorrhaphy.

F. B. Sorgatz, Oklahoma City. The relation of laboratory to modern medicine. *Abstr*—The importance of blood examinations in syphilis with description of a new method.

F. H. Clark, El Reno. Surgical symptomatology of the right upper abdominal quadrant. *Abstr*—Several conditions in this region must be differentiated. Two or more may occur in same patient. Significance of pain. Diagnosis and treatment.

Clinics.

CORRESPONDENCE AND MISCELLANEOUS

STATE INDUSTRIAL COMMISSION

State of Oklahoma

Oklahoma City, March 23, 1916.

Dr. Claude A. Thompson, Muskogee, Oklahoma

My Dear Doctor: A few days ago I was handed a copy of the Journal of the Oklahoma State Medical Association by our mutual friend, Dr. Roy Carson of Shawnee, Oklahoma, which contains some correspondence between the Industrial Commission and Dr. W. G. Brymer of Dewar, Oklahoma, also a letter from Dr. Brymer to you.

Dr. Brymer is entirely mistaken when he states that the Commission endeavored to bluff him into accepting a smaller fee than that which he was claiming. The Commission, since its organization, has never attempted to reduce a physician's fee unless both sides were given an opportunity to be heard on the bill and as far as the Commission being favorable to the insurance companies, we desire to say that we have endeavored to be fair to all and have tried to be the buffer between the unscrupled physician, and also insurance companies of the same kind.

We have repeatedly refused to consider a fee bill in Oklahoma, believing that if we did it would bring about a great deal of surgery in the state that might be avoided where there was not a specific amount set for the service, and possibly would be a detriment to the claimant, as well as the insurance carrier, but we are free to say that if the medical profession in the state does not endeavor to do the right thing with the insurance companies writing this kind of insurance and the self assured, the Commission will be forced to take the matter in hand. We have always believed that the profession in the state was large enough and broad enough to see these matters from the right standpoint and we hope that you will see them as we do.

We would like for you to place this letter before the profession.

Yours very truly,

W. L. BLESSING, Commissioner.

HEALTH HINTS FROM U. S. PUBLIC HEALTH SERVICE.

DO YOU KNOW THAT—

Sags in roof-gutters may act as mosquito breeding places?

America's most valuable crop is babies?

The public cigar-cutter is a health menace?

The United States Public Health Service maintains a loan library of stereopticon slides?

The typhoid rate measures accurately community intelligence?

Whooping cough annually kills over ten thousand Americans?

Bad housing produces bad health?

Rocky Mountain spotted fever is spread by a wood-tick?

There is no Federal institution in the continental United States for the reception and care of lepers?

Plagues is a disease of rodents?

Malaria is spread by a special mosquito?

House screening is a good disease preventive?

Fingers, flies and food spread typhoid fever?

Pellagra may be prevented or cured by proper diet?

The United States Public Health Service believes that the common towel spreads trachoma, a disease of the eyes?

Children from sanitary homes advance more rapidly in school than those from dirty premises?

PELLAGRA PREVENTION—SPRING DIET DETERMINES SUMMER SYMPTOMS

A faulty or restricted diet at this season of the year is the chief factor in the production of pellagra. Measures to prevent the development of the disease should be instituted during the early Spring months, according to a circular of information issued today by the United States Public Health Service. While the manifestations of pellagra are in most cases not in evidence until June or July, the condition invariably dates from a faulty diet of earlier months. Therefore, if due precautions are exercised by individuals at the present time the havoc wrought by this scourge may be greatly lessened, if not entirely eliminated.

Danger Signals

The report further calls attention to certain danger signals which should be recognized by those who reside in pellagrous districts or those who have had previous attacks of the disease. Among such warning symptoms are extreme nervousness or change in the mental characteristics of the individual. Weakness or debility, a disinclination to undertake the ordinary daily tasks, and unexplained digestive symptoms may all be premonitory signs. These symptoms do not, of course, necessarily mean the development of pellagra, but taken in connection with the history of a one-sided, monotonous, diet, they serve as a definite warning of the possibilities of its onset.

Spring Diet

The diet recommended by the health service for the prevention of pellagra will not produce results if followed for a week or ten days only, but if continuously and consistently used, under circumstances similar to its administration in the various institutions where the experimental tests have been performed, it will protect the individual against the development of the disease. Necessarily, a rigid unvaried diet is wholly undesirable and the menu recommended is only to indicate in a general way the character of the food to be prescribed. Frequently the element of poverty, inaccessibility to market supplies, or even personal idiosyncrasy, may require some modification of the diet table, so that strict adherence to its components may not in all respects be practicable. The object of the diet as submitted is to minimize the consumption of the carbo-hydrate (starchy and sweet) foods and to increase the amount of fresh animal protein and of fresh legumes (peas and beans.)

The breakfast, for example, should consist of oatmeal and cream, without sugar, with either ham or breakfast bacon and two eggs. Not more than two thin slices of whole wheat bread should be taken, preferably untoasted. Hot bread or biscuits are inadvisable. A glass of fresh milk is to accompany the breakfast and either oranges or grape fruit may be the initial course. The dinner should consist of either pea or bean soup, prepared from dried peas or beans, with a meat stock. The meat may be beef, pork, ham, chicken, veal or mutton, prepared in whatever manner is the most appetizing, preference being given to roasting or broiling rather than frying. Hamburger steak, meat hash, or fish may be substituted to afford variety. Care should be exercised that the meats are not overdone. Of vegetables, Irish potatoes, boiled in the jacket or baked, cabbage, turnip or mustard greens, collards and lettuce, are to be recommended. For dessert, stewed, fresh or dried fruit will prove sufficient. The dinner should be accompanied by not more than two thin slices of whole wheat bread and a glass of buttermilk. The supper should consist of pork and beans, or baked beans properly seasoned, the usual amount of bread and a glass of buttermilk. If preferred, eggs, scrambled or otherwise prepared, may be substituted for the more substantial ingredient of the meal.

Diet Cheap and Ample

A diet such as the above is not prohibitive as to cost, at least to but few of the residents of the country, affords a sufficient number of heat units, if taken in reasonable quantity, and will effectually prevent the development of a disease which alone caused 8,000 deaths in the United States during the past year.

CLINICAL FACILITIES OF KANSAS CITY OFFERED TO VISITING PHYSICIANS

The Kansas City Clinical Association is a recently organized body of reputable practitioners who have charge of various hospitals and clinics in Kansas City, and desire to extend the courtesies of the institutions to visiting physicians of repute from surrounding states.

Kansas City has a wealth of clinical material, but no serious effort has been made until now to classify the cases so that visiting physicians could observe operations and study the conditions in which they might be specially interested.

The Clinical Association has been organized for the purpose of enabling visiting physicians to learn at a common source what hospitals, clinics and dispensaries are open to them and the kind of cases under treatment from day to day.

Several new hospitals have recently been constructed in Kansas City, and these, with the splendidly equipped new General Hospital, offer large opportunities for visiting physicians to profit by the great variety of cases.

One swallow doesn't make a summer, and one test doesn't constitute a guarantee of satisfaction. There are always a number of aspects to every article of utility, and although it may measure splendidly up to one of these aspects, if it fails in all the rest it cannot be said to be a very efficient article. "Best by every test" is the measure of efficiency. That is the measure by which Calumet Baking Powder excels. Chemically, physically, physiologically, and domestically, it fulfills all the demands of modern science and art. It is chemically correct, physically pure, physiologically wholesome, and domestically efficient and dependable. If you can think of any other quality that ought to characterize a first class baking powder, no doubt the manufacturers will see to that, too. Personally, we can't. It looks to us as if a baking powder that can make good on those four claims is about as nearly perfect as a baking powder can be. However, you know the old proverb—"the proof of the pudding is in the eating of it." Calumet will stand that test, too.

PROPAGANDA FOR REFORM

Emetic Action of Drugs. The investigation of R. A. Hatcher and C. Eggleston show that the nauseant and emetic action of many drugs is not due to their effects of the stomach, but to a central action on the "vomiting center." Practically all alkaloids and alkaloidal drugs which have emetic properties, including morphin and preparations containing it, emetin, cephaelin, quinin, nicotin, lobelin, pilocarpin, aconite and veratrin, ergot and apomorphin, which produce nausea or vomiting as their chief or side actions, do so by direct effect on the vomiting center. Sodium salicylate, pierotoxin and digitalis also produce vomiting through central action. These investigations show the futility of the many devices which have been employed in attempts to avoid the nausea or emesis produced by many drugs as an undesired side-effect (Jour. A. M. A., March 11, 1916, p. 817).

Alarming Symptoms Caused by Disarsenol. Disarsenol is made by the Synthetic Drug Company of Toronto, Canada. It is stated to be chemically identical with salvarsan. A. H. Cook, Hot Springs, Ark., reports that he has administered fourteen intravenous injection of Disarsenol. Eleven consecutive doses were without untoward effect or phenomena differing from those attending the intravenous administration of salvarsan. The three subsequent doses produced alarming symptoms which Dr. Cook never observed from the use of salvarsan or neosalvarsan. (Jour. A. M. A., March 18, 1916, p. 865).

Clinical Report on Arsenobenzol. "Arsenobenzol" is being made by the Dermatological Research Laboratories of the Philadelphia Polyclinic. It is stated to be chemically identical with salvarsan. O. S. Ormsby and J. H. Mitchell report a series of 184 injections given to seventy-five patients suffering with syphilis in its various stages. They report that the action of this drug has been uniform, its toxicity low, and its therapeutic results excellent (Jour. A. M. A., March 18, 1916, p. 867).

Endorse the Council on Pharmacy and Chemistry. The following resolution was presented at the San Francisco meeting of the A. M. A. and signed by all the members of the house of delegates in attendance: "Resolved, We, Members of the House of Delegates of the American Medical Association, believe that every effort must be made to do away with the evils which result from the exploitation of the sick for the sake of gain. Earnestly believing that the continued toleration of secret, semi-secret, unscientific or untruthfully advertised proprietary medicines is an evil that is inimical to medical progress and to the best interest of the public, we declare ourselves in sympathy with, endorse and by our best efforts will further the work which has been and is being done by the Council on Pharmacy and Chemistry of the American Medical Association in the attempt to eliminate this evil." (Jour. A. M. A., March 18, 1916, p. 910).

Larkspur for Pediculosis Capitis. Various formulas for tincture of larkspur for use against pediculosis capitis have been published, but larkspur is poisonous and harm may result where there are abrasions of the skin. Many prefer kerosene. It is applied under a suitable cap. After twenty-four hours the hair is combed to remove nits and then washed (Jour. A. M. A., March 18, 1916, p. 913).

NEW BOOKS

In this department publications sent THE JOURNAL will be acknowledged as they are received. Reviews of new publications will be made only as space and time permit. Publishers are requested to bear this in mind in forwarding books, etc., for review.

DISEASES OF THE SKIN. By Henry H. Hazen, A. B., M. D. Professor of Dermatology in the Georgetown University, etc. Illustrated with two hundred and thirty-nine illustrations, four color plates, 539 pages. C. V. Mosby Company, St. Louis, 1915.

PAINLESS CHILDBIRTH, EUTOCIA AND NITROUS OXID-OXYGEN ANALGESIA. By Carl Henry Davis, M. D., Chicago, Associate in Gynecology, Rush Medical College, etc. Cloth 134 pages, Forbes and Company Chicago, 1916. Price \$1.00. We have had so much hysterical rot on the part of our daily press and so much of the attempt to capitalize the fears of the prospective mother by certain designing physicians into mere money in their pockets, that it with pleasure we welcome this little exposition of one phase of analgesia and comparative painless labor. The author states his views of the relative value of different methods, states they are all proper under certain limitations and conditions, that nitrous oxid is the best for the greater number, cites its ease, practicability and safety of administration in the hands of all obstetricians and gives his opinion that it shortens labor 25 per cent.

PELLAGRA, Second Edition. By George M. Niles, M. D., Gastroenterologist to the Georgia Baptist Hospital, Wesley Memorial Hospital and Atlanta Hospital, Atlanta, Georgia. Octavio of 261 pages, illustrated. Philadelphia and London: W. B. Saunders Company, 1916. Cloth, \$3.00 net.

The study of pellagra has lately received a decided impetus from the report of Goldberger's experimentally produced cases and the interest aroused by the report of the studies and deductions of the Thompson-McFadden Commission for the study of the affection. The new issue of Dr. Niles' book on this subject, which embraces the above noted advances should be well received by those interested in the problems involved.

PROGRAM

TWENTY-FOURTH ANNUAL MEETING OKLAHOMA STATE MEDICAL ASSOCIATION,
OKLAHOMA CITY, OKLA., MAY 9, 10 and 11, 1916.

General Information

PLACE

Tuesday, May 9th, will be devoted to clinics, a meeting of the Council and House of Delegates at 4:30 p. m., and a general meeting at 8:00 p. m. All meetings will be held in Irving School Building, 3rd and Walnut.

CLINICS

Will begin at 8:00 a. m. and be held at the University, University Emergency, St. Anthony's and Wesley Hospitals. A list of these brought up to date may be had at the registration desk, Lee-Huckins Hotel.

REGISTRATION

Desk will be open in the Lee Huckins Hotel lobby up to the hour of 3:00 p. m., after which it will be open throughout the meeting at Irving School. **Members in good standing only** will be registered and given badges and those contemplating attendance will save themselves and the registration clerk trouble and confusion by attending to this in advance of the meeting.

BUSINESS

All matters of business and policy should be presented to either the Council or Delegates, as the case may be. The Council considers all matters of business, while those of policy are determined by the Council and House of Delegates. The Sections handle the scientific program exclusively.

GENERAL MEETING

Tuesday, May 9, 8:00 p. m.

This meeting will be open to the public and will be held in Irving School.

Invocation—Rev. H. E. VanHorn, Oklahoma City,

Address of Welcome—Hon. E. E. Blake, Oklahoma City,

Response—Dr. C. S. Bobo, Norman,

President's Address—Dr. J. H. White, Muskogee,

Discussion of Workmen's Compensation Law—Hon. A. A. McDonald, Chairman, Dr. A. K. West, Oklahoma City, and others.

CLINICS TO BE HELD IN THE HOSPITALS IN OKLAHOMA CITY, ON MAY 9th

Hours, 8 to 12—1 to 4.

ST. ANTHONY'S

SURGICAL—Horace Reed, John Riley, S. R. Cunningham, M. Smith, Curt von Wedel.

ORTHOPEDIC—R. L. Hull and J. A. Brooke.

MEDICAL—G. A. LaMotte, C. R. Day, A. D. Young, J. T. Martin.

EYE, EAR, NOSE AND THROAT—D. D. McHenry, E. F. Davis.

WESLEY

SURGICAL—A. L. Blesh and M. E. Stout.

MEDICAL—J. T. Edwards, C. E. Lee.

ELECTRO THERAPEUTICS AND SKIN—E. S. Lain and M. M. Roland.

EYE, EAR, NOSE AND THROAT—W. E. Dixon, H. C. Todd,

OBSTETRICS—W. W. Wells.

UNIVERSITY AND EMERGENCY

SURGICAL—LeRoy Long and C. E. Clymer, L. F. Watson, J. F. Kuhn.

GYNECOLOGY—J. S. Hartford.

MEDICAL—C. J. Fishman, L. A. Riely, A. W. White.

EYE, EAR, NOSE AND THROAT—L. H. Buxton, E. S. and C. D. Ferguson.

GENITO-URINARY—W. J. Wallace and Rex J. Bolend.

RECTAL—A. A. Will.

NOTE—Lunch will be served at the Hospitals during the noon hour.

Complete list can be secured Tuesday morning, May 9, at Information Desk, Lee Huckins Hotel

SECTION ON EYE, EAR, NOSE AND THROAT

Dr. Edward F. Davis, Oklahoma City, Chairman.

WEDNESDAY, MAY 10 — 9:00 A. M.

1. Chairman's Address—"Conservation of Vision."
- The Accessory Sinsues of the Nose:
2. "Anatomy, Physiology and Pathology"-----Dr. A. C. McFarling, Shawnee
3. "Symptomatology and Diagnosis"-----Dr. J. H. Barnes, Enid
4. "Treatment—Conservative and Radical"-----Dr. G. E. Hartshorne, Shawnee
- Keratitis:
5. "Etiology and Pathology"-----Dr. Phil. F. Herod, El Reno
6. "Symptomatology and Diagnosis"-----Dr. E. S. Ferguson, Oklahoma City
7. "Treatment"-----Dr. D. D. McHenry, Oklahoma City
- Ear:
8. "Chronic Catarrhal Deafness"-----Dr. Chas. M. Fullenwider, Muskogee
9. "Suppurative Otitis Media"-----Dr. L. A. Newton, Oklahoma City
10. "The Mastoid"-----Dr. A. W. Roth, Tulsa
11. "A Double Pterygium Operation—Report,"-----Dr. M. K. Thomspson, Muskogee

SECTION ON SURGERY, GYNECOLOGY AND OBSTETRICS

Dr. J. S. Hartford, Oklahoma City, Chairman.

WEDNESDAY, MAY 10 — 9:00 A. M.

1. Address by Chairman-----Dr. J. S. Hartford, Oklahoma City
2. "Observation of Gunshot Wounds Made in the late Turko-Balkan and in the Present European War" (Illustrated)-----Dr. Edgar L. Gilcreest, Gainesville, Texas
Discussion—Dr. George McLean, Oklahoma City.
3. "Gastric Uleer Perforation Followed by Operation Twelve Hours Later and Recovery"-----Dr. Fred S. Clinton, Tulsa, Okla.
Discussion—Dr. Thos. Maze Aderhold, El Reno, Okla.
4. "Puerperal Sepsis"-----Dr. A. H. Bungardt, Cordell, Okla.
Discussion—Dr. Ellis Lamb, Clinton, Okla.
5. "Treatment of Fractures of the Femur"-----Dr. G. A. Kilpatrick, McAlester, Okla.
Discussion—Dr. LeRoy Long, Oklahoma City.
6. "Extra Uterine Pregnancy"-----Dr. McLain Rogers, Clinton, Okla.
Discussion—Dr. Matt Gordon, Weatherford, Okla.
7. "Some of the Most Frequent Bone Lesions"-----Dr. J. A. Brooke, Oklahoma City
Discussion—Dr. M. E. Stout, Oklahoma City.
8. "Dental and Throat Infection and Their Relation to Disease," (Illustrated)-----Dr. W. H. Livermore, Chickasha, Okla.
Discussion—Dr. A. B. Leeds, Chickasha, Okla.; Dr. J. R. Caughron, Oklahoma City.
9. "Gall Bladder vs. Appendix"-----Dr. J. A. Walker, Shawnee, Okla.
Discussion—Dr. John Riley, Oklahoma City.
10. "Indications and Use of Forceps in Obstetrics"-----Dr. J. M. Bonham, Hobart, Okla.
Discussion—Dr. R. E. Looney, Oklahoma City.
11. "Thyroid"-----Dr. Fred H. Clark, El Reno, Okla.
Discussion—Dr. L. F. Watson, Oklahoma City.
12. "The Immediate Care of Lacerations of the Perineum Following Labor,"-----Dr. Wilson P. Cottrell, Milburn, Okla.
Discussion—Dr. Winnie M. Sanger, Oklahoma City.

13. "Varicose Veins of the Leg"-----Dr. R. M. Howard, Oklahoma City
Discussion—Dr. G. A. Wall, Tulsa, Okla.
14. "Indications and Methods of Cesarean Section"-----Dr. E. E. Rice, Shawnee, Okla.
Discussion—Dr. A. C. Hirshfield, Oklahoma City.
15. "Abdominal Drainage from an Anatomical Standpoint"---Dr. Curt von Wedel, Oklahoma City
Discussion—Dr. S. H. Landrum, Altus, Okla.
16. "The Surgeon vs. General Practitioners' Viewpoint in Regard to Gastric Disturbances"
-----Dr. Ross Grosshart, Tulsa, Okla.
Discussion—Dr. W. G. Lemon, Tulsa, Okla.
17. "Pyelitis of Pregnancy and the Puerperium"-----Dr. J. A. Hatchett, El Reno, Okla.
Discussion—Dr. Thos. H. Flesher, Edmond, Okla.
18. "Some Common Diseases of the Female Urinary Bladder"---Dr. George A. Boyle, Enid, Okla.
Discussion—Dr. C. R. Day, Oklahoma City.
19. "Carcinoma of Uterus"-----Dr. O. R. Gregg, Alva, Okla.
Discussion—Dr. Henry A. Lile, Aline, Okla.
20. "One Thousand Consecutive Cases of Appendicitis"—Consideration---Dr. Blesh, Oklahoma City
Discussion—Dr. Davis Meyers, Lawton, Okla.
21. "Procidencia"-----Dr. W. E. Dicken, Oklahoma City
Discussion—Dr. S. R. Cunningham, Oklahoma City.
22. "Endometritis"-----Dr. Lelia E. Andrews, Oklahoma City
Discussion—Dr. P. L. Sanders, Carnegie, Okla.
23. "The Role of the Proper Management of Pregnancy in the Conservation of Mother and
Child"-----Dr. W. A. Fowler, Oklahoma City
Discussion—Dr. W. W. Wells, Oklahoma City.
24. "Contagiousness of Puerperal Fever"-----Dr. S. N. Stone, Edmond, Okla.
Discussion—Dr. S. C. Davis, Weatherford, Okla.
25. "Eclampsia"-----Dr. I. L. Cummings, Ada, Okla.
Discussion—Dr. C. B. Taylor, Oklahoma City.
26. "Suprapubic vs. Perineal Prostatectomy"-----S. N. Mayberry, Enid, Okla.
Discussion—Dr. Horace Reed, Oklahoma City.
27. "Operation for Cure—Acute, Sub-Acute and Chronic Epididymitis"-----
-----Dr. W. J. Wallace, Oklahoma City
Discussion—Dr. Joseph Hoy Sanford, Muskogee, Okla.
28. "Anesthesia"-----Dr. J. T. Riley, El Reno, Okla.
Discussion—Dr. Floyd Bolend, Oklahoma City.
29. "So-called Chronic Appendicitis Which is Located in the Cecum and Ascending Colon,"
-----Dr. F. A. Hudson, Enid, Okla.
Discussion—Dr. H. M. Williams, Wellston, Okla.
30. "The Danger Signals Due to the Approach of the Menopause"---Dr. W. G. Bisbee, Chandler
Discussion—Dr. Harry Breece, Henryetta, Okla.
31. "Stasis,"-----Dr. V. C. Tisdal, Elk City
Discussion—Dr. A. F. Risser, Blackwell

SECTION ON PEDIATRICS

Dr. Carl Puckett, Pryor, Chairman.

WEDNESDAY, MAY 10 — 9:00 A. M.

1. Chairman's Address—"Value of Healthy Childhood."
2. "Improvement of Race and National Vitality"-----Dr. M. A. Warhurst, Sylvian
3. "The Sequelae of Measles"-----Dr. Geo. W. Tilly, Kusa
4. "The Infections of Childhood"-----Dr. Winnie M. Sanger, Oklahoma City
5. "Pre-Natal Influence"-----Dr. E. Forrest Hayden, Tulsa
6. "Acute Pyelitis of Early Childhood"-----Dr. W. M. Taylor, Oklahoma City
7. "Sarcoma of Kidney"-----Dr. Roscoe Walker, Pawhuska
8. "Laryngeal Diphtheria"-----Dr. H. M. Williams, Wellston
9. "Infant Feeding"-----Dr. M. P. Springer, Tulsa
10. "Gonorrhoeal Ophthalmia,"-----Dr. R. L. Mitchell, Vinita

SECTION ON GENERAL MEDICINE, MENTAL AND NERVOUS DISEASES

Dr. J. S. Fulton, Atoka, Chairman.

WEDNESDAY, MAY 10, 1916, 9:00 A. M.

1. Chairman's Address.
2. "The Role of Heredity in the Cause and Treatment of Disease" Dr. C. W. Heitzman, Muskogee
3. Mortality Around Fifty Years, ----- Dr. J. H. Florence, Houston, Texas
(Fraternal Delegate from Texas State Medical Association)
4. Nature and Treatment of Chronic Renal Disease-----Dr. C. J. Fishman, Oklahoma City
5. Symposium on Pellagra:
(a) "Diagnosis and Symptomatology of Pellagra"-----Dr. C. R. Hume, Anadarko
(b) "Management and Treatment of Pellagra"-----Dr. J. C. Watkins, Checotah
(c) "The Prevalence of Pellagra in Oklahoma"-----Dr. J. L. Day, Norman
6. "Perforation in Typhoid Fever"-----Dr. LeRoy Long, McAlester
7. Symposium on Tuberculosis:
(a) "The Early Diagnosis of Pulmonary Tuberculosis"-----Dr. W. W. Rucks, Guthrie
(b) "A Paper on Tuberculosis"-----Dr. Horace Reed, Oklahoma City
(c) "Tuberculosis from the Layman's Standpoint"-----Mr. E. K. Gaylord, Oklahoma City
8. "Some of the Complications and Sequelae of Pneumonia"----Dr. T. H. McCarley, McAlester
9. "Early Cancer of the Stomach"-----Dr. Arthur W. White, Oklahoma City
10. "An Inquiry Into the Medico-Legal Status of Traumatic Neuroses,"---Dr. West, Oklahoma City
11. "The Diagnostic and Therapeutic Effect of Lumbar Puncture" Dr. Lea A. Riley, Oklahoma City
12. "Some Phases of Psychanalysis,"-----Dr. J. W. Duke, Guthrie
13. "Malarial Haematuria,"-----Dr. T. H. Briggs, Atoka
14. "Adenoids, Diseased Tonsils and the General Practitioner,"-----Dr. A. S. Risser, Blackwell

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TUESDAY, MAY 9

Registration of members—Parlor, Lee Huckins Hotel.
3:30 P. M.—Call to Order by the President.
Address of Welcome—Mrs. LeRoy Long, Oklahoma City.
Response—Mrs. T. C. Sanders, Shawnee.
President's Address—Mrs. E. Forrest Hayden, Tulsa.
Reading of Minutes of Previous Meetings by Secretary, Mrs. H. H. Bishop, Tonkawa.
Report of Delegates—Report of Officers.
Paper—"Health and Character," Mrs. S. F. Brafford, Billings.
Vocal Solo—Mrs. E. S. Ferguson, Oklahoma City.

WEDNESDAY, MAY 10, 10:00 A. M.

Piano Solo—Mrs. F. A. Lively, Blackwell.
Paper—"Diseases of Throat Common to Childhood," (Mrs.) Dr. Chas. Barker, Guthrie.
Discussion.
Paper—"Problems Confronting Oklahoma," Mrs. D. F. Coldiron, Red Rock.
Paper—Subject Unannounced. Mrs. C. S. Bobo, Norman.
Discussion—"Shall We Continue the Auxiliary," Mrs. Mayginn's, Tulsa.
3:00 P. M.—Tea. (Place to be announced).
8:00 P. M.—Line Party, Liberty Theatre.

THURSDAY, MAY 11, 10:00 A. M.

Unfinished business. New business. Election of Officers. Report of Committees. Adjournment.

DIRECTORY, OFFICERS OF OKLAHOMA MEDICAL ORGANIZATIONS, STATE MEDICAL ASSOCIATION.

Annual Meeting, Oklahoma City, May 9-10-11, 1916.

President—Dr. J. Hutchings White, Muskogee.

Vice-Presidents—Drs. Walter Penquite, Chickasha; L. T. Strother, Nowata; W. A. Cook, Tulsa.

Secretary-Treasurer-Editor—Dr. C. A. Thompson, Muskogee.

Delegates to American Medical Association—1916, Dr. Walter Penquite, Chickasha; 1916-1917, Dr. John Riley, Oklahoma City.

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2. Roger Mills, Beckham, Dewey, Custer, Washita and Woodward; Councilor, Dr. Ellis Lamb, Clinton.
3. Harmon, Greer, Jackson, Kiowa, Tillman, Comanche and Cotton; Councilor, Dr. G. P. Cherry, Mangum.
4. Major, Alfalfa, Grant, Garfield, Noble and Kay; Councilor, Dr. Walton McKenzie, Enid.
5. Kingfisher, Canadian, Oklahoma and Logan; Councilor, Dr. Fred Y. Cronk, Guthrie.
6. Caddo, Grady, McClain, Garvin, Stephens and Jefferson; Councilor, Dr. C. M. Maupin, Waurika.
7. Osage, Pawnee, Creek, Okfuskee, Okmulgee and Tulsa; Councilor, Dr. Walter E. Wright, Tulsa.
8. Payne, Lincoln, Cleveland, Pottawatomie and Seminole; Councilor, Dr. H. M. Williams, Wellston.
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10. Washington, Nowata, Rogers, Craig, Ottawa, Mayes and Delaware; Councilor, Dr. R. L. Mitchell, Vinita; District Society, L. T. Strother, President, Nowata; J. V. Athey, Secretary, Bartlesville.
11. Wagoner, Muskogee, McIntosh, Haskell, Cherokee and Adair; Councilor, Dr. P. P. Nesbitt, Muskogee.
12. Hughes, Pittsburg, Latimer, LeFlore and Sequoyah; Councilor, Dr. L. S. Willour, McAlester.
13. Atoka, Pushmataha, Bryan, Choctaw and McCurtain; Councilor, Dr. J. L. Austin, Durant.

CHAIRMEN OF SCIENTIFIC SECTIONS.

- Surgery, Gynecology and Obstetrics—Dr. J. S. Hartford, Oklahoma City.
 Pediatrics—Dr. Carl Puckett, Pryor.
 Eye, Ear, Nose and Throat—Dr. Edward F. Davis, Oklahoma City.
 General Medicine—Dr. J. S. Fulton, Atoka.
 Legislative Committee—Dr. Millington Smith, Oklahoma City; Dr. J. M. Byrum, Shawnee;
 Dr. W. T. Salmon, Oklahoma City.
 For the Study and Control of Cancer—Drs. LeRoy Long, McAlester; Gayfree Ellison, Norman;
 D. A. Meyers, Lawton.
 For the Study and Control of Pellagra—Drs. J. Lewis Day, Norman, Chas. R. Hume, Anadarko;
 J. C. Watkins, Checotah.
 For the Study of Venereal Diseases—Drs. Wm. J. Wallace, Oklahoma City; Ross Grosshart,
 Tulsa; J. E. Bercaw, Okmulgee.
 Necrology—Drs. Chas. W. Heitzman, Muskogee; Martha Bledsoe, Chickasha; J. W. Pollard,
 Bartlesville.
 Tuberculosis—Drs. L. J. Moorman, Oklahoma City; A. S. Risser, Blackwell.
 Conservation of Vision—Drs. L. A. Newton, Guthrie; L. Haynes Buxton, Oklahoma City; G. E.
 Hartshorne, Shawnee.
 Committee on First Aid—Drs. F. H. Clark, El Reno; Chas. Blickensderfer, Shawnee; Jas. C.
 Johnston, McAlester.
 State Commissioner of Health—Dr. John W. Duke, Guthrie, Oklahoma.

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Next Meeting—Oklahoma City, March 6, 1916.

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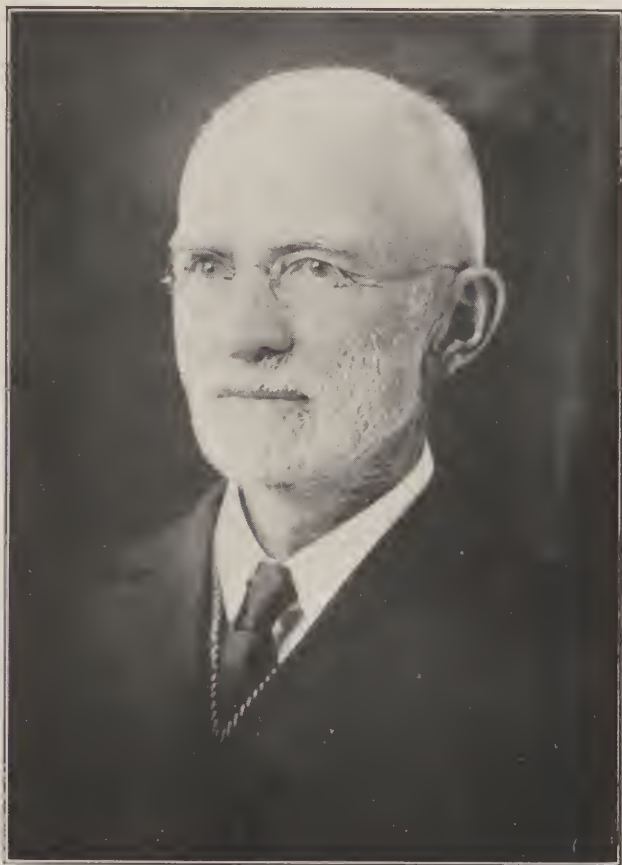
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DR. CHARLES ROBINSON HUME

PRESIDENT, 1916-17, OKLAHOMA STATE MEDICAL ASSOCIATION

Dr. Charles Robinson Hume was born in the State of New York. When a lad his parents removed to Southern Michigan. He attended the common schools of the neighborhood, and Oak Grove Academy at Medina, Mich.


In 1871 he matriculated as a medical student in the University of Michigan, from which school he graduated in 1874. He began the practice of medicine in Perrysburg, Ohio, and in 1876 was married to Miss Annette Ross of that city.

After a residence of seven years in Ohio, in the winter of 1880-81 he located in Caldwell, Sumner County, Kansas, on the border of the Cherokee Outlet, then in Indian Territory, now Oklahoma.

In 1890 he was appointed resident physician in the U. S. Indian Service on the Kiowa and Comanche Reservation, holding the position for eleven years until this reservation was opened to white settlement.

In the organization of Caddo County he was appointed as first County Health Officer and holding the position until Statehood. He was the first president of the Caddo County Medical Society and for the past nine years has been Secretary-Treasurer of the same. He has been a member of the Territorial and State Medical Societies for about twenty years and was the Councilor for the Third District for six years, and in 1914 was Vice-President. At the last meeting was elected President of the State Society for the ensuing year.

THE JOURNAL

of  the

Oklahoma State Medical Association

Volume IX

MUSKOGEE, OKLA., JUNE, 1916

No. 6

PRESIDENT'S ANNUAL ADDRESS*

J. Hutchings White, M. D., Muskogee, Okla.

Gentlemen of the Oklahoma State Medical Association: I wish to thank you for bestowing upon me the highest honor at your hands. It has been a source of great pleasure to serve a body of men banded together not for selfish gain but to better serve the people, alleviating their pain and making their hours of sickness as free from discomfort as possible. Joined together that we may thereby better unravel problems which make for maintaining health. I cannot fully express to you my gratitude for your able aid and assistance in carrying on this Association work.

This society is entering the ninth year of its work and with the advent of another year there are greater responsibilities to face. More is expected of us by the public and we must fulfill or, better, surpass expectations.

With the interest of the Association at heart, and my interest in the future welfare of the profession as well as the good which will accrue to the public of the State of Oklahoma, I am constrained to present to you some of the problems which it is necessary that we undertake to solve without delay.

This Association is built up of units, those units being the county societies. The interest manifest in each county society increases the attendance at the State organization and promotes the success of the latter. The county societies, which are free from meetings, show poor attendance at the State society. Unless interest is manifest at home, unless the scientific as well as the business side of the county society work receives due attention and enthusiasm, the members do not take an interest in the work of the State Association.

There is no reason why a county society should not have regular meetings and a scientific program with the exhibition of clinical cases. That does not mean the bringing before the society a patient who has puzzled his doctor in making a diagnosis and that he is simply brought for the purpose of getting free consultation. Each clinical case presented should have a complete written history, result of doctor's examination, tests and his diagnosis. The details of an anamnesis should be carefully tabulated, so that too much time is not taken up during the meeting. Such procedure, with scientific papers, make an interesting meeting and means more to the physician making such preparation than to any other member present. It is necessary for me to bring to your attention these points in order to more forcibly impress upon you the importance of the thorough working of the various units of the State Society in order to produce, when those various

*Delivered at Twenty-fourth Annual Meeting of Oklahoma State Medical Association, Oklahoma City, May 10, 1916.

units are brought together, a homogenous gathering, all working together for the advancement of our science and the greatest benefit to the public of our State. So if these points are carried out in the county societies and there is a general discussion those members will have less difficulty and diffidence in joining in discussions and presenting papers on scientific subjects at the State Association.

Unless the scientific side of our work continues to grow and increase in volume, we will fall behind. The meetings of the State Association take on an average less than five days annually from the work of those members who attend, and I am sure they do not spend any five days to better advantage to themselves and their patients during the year. One cannot stay at home and keep abreast of the changes in medicine and surgery. It is absolutely necessary that society meetings should be attended and post-graduate work taken. One returns from such a trip with new ideas and renewed vital interests. They remove themselves from ruts, which will result in rust and decay. These things and all of them are necessary to the growth and welfare of the State Association.

A short time ago there was sent to the secretary of each county society a letter requesting the influence of the members of the various societies, with their senators and representatives, regarding measures to be introduced in the State bodies at the next meeting of the Legislature. Our legislative committee is an efficient one and its members are experienced. They are doing the best they can under existing conditions. With the help of each member of the county societies, this committee's work can be greatly facilitated. When the bill is brought before the House, the member will immediately recall what has been more than once brought to his attention by his constituent at home and will, I trust, do the right thing. If we believe in the principles for which the medical profession stands, how can we vote for a representative who refuses to support our just contentions? We are not asking for anything that is illegal or illogical. We are fighting for the public good. Certainly there is enough work for the members of the profession. When a man, however, in whose body the milk of human kindness flows, sees a case of appendicitis which has been denied the life-saving operation, or a typhoid case which is bleeding to death, due to mismanagement by some ignorant individual trying to adjust what he calls a dislocated spinal vertebra or remove error, he boils with indignation. Yet such men and women are taking care of the sick in this State. What we want is a definition of the term "practice of medicine," and the same examination in the fundamental branches for all who care for the sick. When a lawyer wishes to practice law he goes before the board and stands an examination or is registered by reciprocity with another state. This board does not care whether he devotes his time to criminal law or to corporation law. Neither should the State Medical Board ask whether a man is to practice osteopathy, homeopathy, regular or electric, or what. Any one taking care of the sick should be examined in the fundamental branches, as it is necessary, regardless of method used in such treatment, that they should be intelligent enough to recognize the fact that certain signs and symptoms indicate certain diseases. We well enough know that the best qualified make sufficient errors.

We are residents of this glorious new State and our first interests should be here. It is a duty imposed upon the medical profession to promote those things which tend to improve the general hygiene of the State and thereby lengthen life and prolong the health of its inhabitants.

It was that grand old Englishman, Gladstone, who said: "In the health of the public lies the wealth of the nation." It is to the medical profession that the general public look for guidance in the matter of public health. Our State Board of Health, under the able direction and leadership of the Commissioner of Health at Guthrie, maintains a laboratory for the examination of food, drinking water, milk and pathological specimens of all kinds. He is anxious that the members of the profession take advantage of the opportunities offered. There is no reason why a physician treating a fever should continue to doubt whether he

is dealing with a malaria or thypoid when a specimen of blood at the small cost of a few cents transportation will settle the question. Nor is it necessary for him to long debate whether he is dealing with diphtheria. Culture tubes are easily procured and when sent to the laboratory, with a smear from throat, they are examined gratis and you are informed of the result. Our excellent Commissioner, through his department, not only puts you right on your diagnosis, but in those cases of diphtheria among the poor, who are unable to purchase antitoxin, it is furnished free of charge. The physician in charge is required to make application to the nearest druggist having a supply. Your county health officer can furnish details, blanks, etc. The practitioner in a small town is thus given the same advantage as the physician in the larger cities.

The office of Commissioner of Health should be as free from politics as possible and the head should not be changed every year or two. It is necessary that an official of this type should remain in office for years, if he is to attain to any state of efficiency. His assistants over the State should be appointed on merit. Dr. Duke, the present incumbent, has made his appointment of county health officers without fear or favor, in each case selecting a physician qualified to make a good officer. These officers should be helped and not hindered in their work, by prompt report of births, deaths and contagious diseases. The vital statistics accumulating in the office of the board of health will be of great value in the future and a guide at present in the working of this department.

About one year ago there was taken up a crusade by the profession on cancer. While the work has not been carried out on the same scale as the tuberculosis crusade, it has yielded most encouraging results. According to a recent report by Bloodgood, in the last three years the number of benign cases of breast tumor applying at the Johns Hopkins Hospital have increased 12 per cent. over the previous three years. Of those cases of cancer appearing for aid, the fully-developed cancer of the breast has decreased, showing that education of the public is having good effect. The cancer problem is one of the greatest of our responsibilities. Fully half of the 80,000 people who die of this trouble in the United States each year should be saved. Gentlemen, that does not mean one poor soul spared the tortures of this disease to each physician in the United States. Let the State laboratory help you in the diagnosis of your specimens. We can then get some idea of the number of cases of cancer with which we have to deal.

We have in our midst an institution which should be made the equal of any in the West, and by far superior to that of any of the southwest. I refer to the School of Medicine of the Oklahoma State University. Few of us know much of this department of our University and the magnificent opportunities it offers to physicians and students.

The first two years of the medical course are given at Norman, where the fundamental branches of physiology, pathology, bacteriology, histology, embryology, physiological chemistry, pharmacology and materia medica are taught in a systematic way. There is an abundant amount of material, many extra cadavers being kept in excellent state of preservation. In order to comply with the requirements of the Council on Medical Education, six full-term instructors now have charge of this work. With a small extra appropriation of \$4000, provided shortly after Dr. Long, the dean, took charge of this work, a contract was made with Oklahoma City through which the city hospital was acquired. This institution was remodeled in such way that it is now used for clinics, lecture rooms, laboratory, X-ray outfit, library, museum and office, using the two upper stories for hospital purposes. Arrangement with three institutions give the students a generous supply of obstetrical work. Affiliation with other hospitals in Oklahoma City affords ample clinical material for bedside instruction in the practice of medicine and surgery. In addition to these advantages for the students, the College has a most excellent teaching corps in which there is earnest, congenial co-operation. The members of the profession are cordially received and invited

to take advantage of the opportunity to review anatomy and do experimental animal work.

Allow me to quote from a letter received from Dr. Long: "I am very anxious that the physicians of the State take advantage of our facilities for study and review, both here and at Norman. For instance, there is a splendid opportunity to take review work in anatomy, experimental work in animals, and so on, and there is no charge at all except for material. I wish the doctors to come here and make themselves at home in our class-rooms, in our laboratories, in our hospitals, as long as they wish."

This institution has a B grade. It deserves better. The medical department of twenty-seven state universities are classed in A grade. Arkansas and Oklahoma alone stand in B grade. This reflects on every member of the medical profession in the State. This department deserves more support from the State, in order that its proficiency may be increased to comply with the requirements of A grade. A larger appropriation by the State is all that is necessary for the present faculty to provide these requirements. Money is the only necessary factor lacking. A little work by the members of this Association, pushing this proposition with the State officials, and the time when we will be proud to say our medical school is the equal of any in the Southwest will not be long.

In the address of my predecessor your attention was directed to the medical defense bureau of this Association. In view of the fact, however, that there seems to be a great deal of misunderstanding among the members of the Association, I think it advisable to attempt to elucidate some of the points which are misunderstood.

Many of the state medical associations have a defense bureau and the fees of this feature vary in the different states. It is obligatory for all members, however. In other words, a member of the state society is a member of the defense bureau and entitled to the privileges thereof. It is not an optional feature. The states of California, Illinois, Indiana, Iowa, Kansas, Kentucky, Maryland, Massachusetts, Michigan, Minnesota, Mississippi, Missouri, Nebraska, New Jersey, New York, North Dakota, Oklahoma, Pennsylvania, Texas, Vermont, Washington, West Virginia and Wisconsin maintain such systems. None of the states have undertaken to conduct this work with the idea of making a profit therefrom, and the defense which has been accorded members in the cases which have presented themselves has been satisfactory to such members.

Your membership in this Association is in force as long as you are in good standing, and if your dues are not paid on or before May 1st, of each year, you are automatically dropped from the Association and consequently not eligible for the privileges accruing from the Defense Bureau. The Defense Committee established this rule: If your dues are not paid before the first of February, you are not eligible to the privileges in any matter, the cause of which occurred from the first of January to the date you finally are placed in good standing. The month of January is a month of grace not accorded members in some of the states.

It seems that many of the members of the Association have read carefully the contract of this department, but have not carefully scrutinized the contract of any defense policy which they may carry now or may have carried in the past. Such policies are not in force unless premiums are paid; neither do they agree to allow the insured to select his own attorney, and many of them reserve the right to defend a malpractice suit in court or adjust same without recourse to legal procedure. Adjustments made out of court are, of course, cases in which the insurance company is convinced that the insured is beyond doubt negligent; neither do these companies agree to defend cases growing out of criminal acts or on services rendered while under the influence of liquor. The defense bureau reserves the right to say whether or not it will defend cases on the same ground. As there is no indemnity feature to this department, of course the expense of settlement will necessarily come from the defendant in such case. It is to the interest of every

member of the Association that each malpractice suit filed should be defeated, and that is the idea which germinated the defense bureau. Few such suits come to trial and of those few far more than the majority are thrown out of court or result in decision in favor of the defendant.

I should be remiss if I did not call your attention to the excellent condition of our Journal and to compliment the editor both on the scientific papers and the business side of the management of this periodical. I find, however, that the number of papers which are printed from time to time are not as great as should be. There has been a remarkable increase in the advertising and it is up to this body to supply this Journal with a volume of scientific literature commensurate with the ability of our members. The editor should have on his desk any month a number of papers sufficient and waiting for publication to cover two or three months' issue.

It has seemed to me during the last few years that politics have played a small part in our Association. However, it is with regret that with the cessation of these petty differences, which in the past caused so much trouble, the increase in scientific work has not been larger. Regardless of divergent views which the various members of this Association may have, the purpose and idea of each member should be to increase the value of this Association to the medical profession of Oklahoma. Personal ambition and self-interest must be subordinated to the one dominant idea of an Association whose true greatness lies in service to mankind.

HOSPITALS*

J. S. Hartford, M. D., F. A. C. S., Oklahoma City.

In this day of rapid growth and development of the hospital, there naturally becomes a keen interest between the physician and management of the hospital, and to this subject we wish to give attention.

We must acknowledge that hospitals have come to stay, made so by the rapid advance in medicine and surgery, and the different spirit of the laity toward the hospital.

How shall we build, maintain and manage hospitals in our state? We cannot build them under the same conditions as the Eastern states that have immense endowments, state, city and county help. All these helps come with age. We will have them in the future just the same as the other states have them, but how shall we bridge the span of years until this time comes—because the sick are ever with us and must be cared for.

Why does a hospital exist? The paramount purpose is the care of the patient. No management of a hospital should allow financial gain or individual advancement of a physician or a group of physicians to interfere with the care and proper treatment of the patient. If they do, that hospital is doomed to failure.

How shall we build hospitals? Here quality, not size, is the great factor. No hospital is entitled to be called a hospital, no difference how small, that does not have its laboratory, its X-ray, its sterilizing room and aseptic operating room. You have no right to accept money from patients and hazard their lives. This does not mean that all hospitals shall be in large cities, but it does mean that a given population will only support a hospital well and unless it be run at a loss only a limited number must be built in a given area.

Four groups of hospitals are being conducted in our state, namely, those conducted by a church or organization of the church, by organizations of city or state, by groups of physicians and by individual physicians. We believe the patient receives the most consideration in the institution class where the active management is controlled and financed by a church, state, or group of physicians and governed by a board of supervisors composed of physicians and laymen.

*Chairman's address, Section on Surgery, Oklahoma City, May 10, 1916.

The day of the surgeon hospital is rapidly passing. The hospitals of this city have greatly increased their income and added wonderfully to the treatment of patients by catering to the internist in the way of providing splendid X-ray and pathological laboratories, with trained men in charge at all times.

No physician should be barred from the use of a hospital in any community, providing he is reputable, ethical and has the proper qualification to treat the case he refers to the hospital. No physician should be permitted to do major surgery who has not had special training over a period of years in a hospital or as an assistant to a trained surgeon, for there is nowhere in the realm of medicine a department that you can so skillfully cover up crude and detrimental work.

In each community men naturally follow lines of work that they are best qualified to do, so that we see in every locality men who are giving special attention to obstetrics, genito-urinary diseases, gynecology, medicine or surgery. A local board composed of these men can pass upon qualifications of doctors in each community and by this arrangement no one be barred from hospital service.

We believe that every hospital should plan its management so that the community which it serves should give it support, and if there occurs a deficit it should be met by a general fund and not by the private income of some physician or surgeon. Every hospital must provide for a certain per cent. of free beds. These may be endowed beds, by churches, lodges or institutions. This method we highly recommend for the hospitals of our state and believe that if properly worked out it will, to a certain extent, take the place until we receive the endowments that we are sure to have in later years.

One of the first and most important things that the management of a hospital should provide is an accurate and careful system of case records. This is a duty to the patient that should never be neglected and can be provided at a minimum cost, when once established. The Congress of Clinical Surgeons, in conjunction with the American College of Surgeons, have taken some advanced steps in this line of work and are suggesting certain systems of records that will be a credit to any hospital that adopts them.

A recent analysis of statistical data compiled by Dr. Frederick L. Hoffman, Statistician of Prudential Life Insurance Company, Orange Memorial Hospital, is a most valuable study of 2,252 cases discharged during the year 1915. They are tabulated as to race, sex and ages. Some of the leading hospitals are now establishing a follow-up system of records in which the patient's record is kept over a period of years, thus learning the end results in clinical and operative treatment.

The establishing of the small hospital, or community hospital, is gaining such popularity that it is well to consider its future. Already we are hearing the cry that the plan of treatment of the poor and those in medium circumstances is not fair and that in order to receive the best treatment one must be a pauper or a rich person, and to meet this condition hospitals are being started in large numbers in the state. We have watched them, some to succeed and many to fail, because in many instances they have been the outgrowth of petty jealousies among physicians.

It is possible, and always should be done, to have an expert pass upon the advisability of having a hospital in a certain community. After it has been determined whether it may succeed, the funds should be provided for building an equipment of a certain bed capacity that it has been estimated will be needed. Funds for this should come from the general public and at the same time provisions be made for the free beds, as every hospital must have them.

The board of managers of these hospitals should be composed of a majority of laymen and the active management given to the superintendent. The medical staff should be composed of the best men in reach of the hospital. The motto of the hospital should be: "Patient's welfare always first." The hospital should

be known and build its reputation on diagnosis and treatment of medical cases. More credit should be given a carefully conducted obstetrical case than a simple operation for appendicitis. More stress should be given the proper diagnosis and treatment of ulcer of the stomach than a gastroenterostomy for incurable cancer of the stomach. More honor should be given to a cystoscopic examination of the bladder and functional test of the kidney than to a nephrectomy without these tests. Cultivate diagnosis and medicinal treatment—surgery, if necessary.

Let the people understand that they come to the hospital to live, not to die; as a first resort and not as a last resort. Have these general principles carried out and the hospital will fulfill its mission to the people of the state.

THE PHYSICIAN—SOME OF HIS DUTIES AND RESPONSIBILITIES*

Dr. J. S. Fulton, Atoka, Okla.

It is again we are here for the purpose of hearing papers and the discussion on internal medicine, mental and nervous diseases. It is again that we, of the noblest and probably of the grandest profession of men, have left our homes, our professional duties and business affairs to come together for the purpose of making ourselves more proficient in our profession, thereby being able to render to humanity greater service. It is here that we, many of us at least, learn of the great advancement being made in medicine.

When we think of the teaching of only a few years ago, especially with those of us who have been in the profession for a quarter of a century and following along during the years since that time to the present, it is wonderful the great strides there have been along the lines of internal medicine.

While it is a fact that the profession has during some years past gone more to surgery, with its brilliant achievements as well as various fads and fancies, until it now seems to the physician that surgery certainly has almost reached its zenith; but far from it with medicine.

During the last few years there have been greater strides made in the medical field than for many years past. The physician should be an energetic individual; there is no place for the lazy man in the practice of medicine. The general practitioner's field is indeed a large one, carrying with it more responsibility than that of the physician who specializes in surgery or any other branch of the profession. Instead of specializing along one certain line he must do so along all lines. He should feel that he is a specialist in diagnosis. Practically every type of case is first seen by him, and if the case is correctly diagnosed and wisely advised as to choice of treatment, much delay and suffering is prevented. Nearly all mistakes in diagnosis are the result of lack of care in examining our patients, rather than lack of knowledge.

Superficial examination, a lack of study of the case, often get us in trouble. If the physician will do his part, he will never have the experience of sending his patient to the surgeon to be operated when the cause of abdominal pain is a pneumonia instead of an appendicitis, or mistake the gastric crisis of tabes for a surgical condition. The use of all the more accurate tests for disease is made possible by the establishment of pathological laboratories in all parts of the country, and the State pathologist makes these tests free. In diagnosis the doctor of today may take advantage of a number of aids which our predecessors lacked, such as the serum tests for typhoid fever, syphilis, pregnancy and gonorrhea; the microscopic and bacteriological examination of specimens in a great variety of conditions; the use of the cystoscope and ureteral catheter and functional kidney tests in urinary diseases; the use of the X-ray in a great variety of diseases, especially bone lesions and gastro-intestinal disease by the use of the bismuth meal.

*Chairman's Address, Section on General Medicine, Nervous and Mental Diseases, Oklahoma City, May 10, 1916.

It is to the general practitioner that the layman looks to for preparedness. It is the family doctor who must carry the first responsibility of all ills of the human body, from the time of conception to birth, from the cradle to the grave; it is the general practitioner who is looked to, to guide the being through all these stages, fighting against disease, steering the individual along lines of sanitation and hygiene for the promotion and maintenance of health. It is a great responsibility—one of hard work, a studious life and a life of self-sacrifice and self-denial. It is a life of education, mingled more or less with joys and sorrows.

The physician is usually a worthy and honorable citizen. His influence is great in the community and greater in the home, his advice being sought on lines other than those of health, hygiene, etc. He is trusted as no other; he has full sway in the home. He should be and usually is the most honored citizen. With this confidence, love and esteem, are we as members of so honorable a profession ever excusable for betraying a trust or in any way failing to come up to that high standard of excellency and honor placed on us by our patrons and friends?

The relationship of the general practitioner and the surgeon or other specialist should be that of the best of friendship and thorough understanding as to their duties toward each other and toward their patrons.

We feel at this time that we have the right and it is expedient that we speak of the question of "fee-splitting," which has in a way been a bone of contention for years in the profession.

There is no doubt but that this pernicious habit by some surgeons has done much toward commercializing medicine and surgery, and building up a large patronage for a time being and adding wealth to the individuals thus engaged, or we might say thus guilty. The physician who will accept a division of fees from a surgeon we believe will refer his patients to such surgeon regardless of whether he is as capable and as reliable in other ways as some other surgeon who does not divide fees. Again, if this practice is participated in by the physician, the tendency would be towards referring his patient to such surgeon or specialist as would refund him the greatest fee. This might be much to the detriment of the patient, other than the money which has been fleeced from him, which detriment is unjust, unfair, and to our mind unbecoming as a gentleman and unethical as a physician.

We will admit that often it is the case that the physician in charge, who has devoted much time, labor and probably sleepless nights, has to send his patient to a surgeon. The surgeon thus referred to gets a good fee and the family physician either waits a long time for his, or probably never gets it. This is unjust, as all will admit, but most often is due to a lack of business ability in the physician in not claiming and demanding his rights. The physician should look after schooling his patrons to pay him for his services. He owes it to his family, to himself and to his patients. If they pay him he can render better service and retain their friendship and higher esteem. The individual who does not, but could pay his doctor bills, is never a good friend to the doctor and is unworthy of the physician's consideration.

In closing we feel we must say something regarding the relationship of one physician toward another. While this has been our hobby from early manhood, it has never grown old with us. It has been said, "Be a gentleman," and there is no occasion to consider medical ethics. While this may be true in the main, there being so wide a range in what is or what constitutes a gentleman in the eyes of professional men as well as the laity, we desire to make some comment along this line.

The young physician starting out in his life's work, full of energy, ambitious to get established, wanting patients and building air castles as to his future, though he be a model young man and physician, desirous of making no mistakes professionally or otherwise, is very likely to step over the bounds of medical ethics,

probably not knowing he is doing so. In so doing he does his neighbor physician and co-worker an injustice, which may lead to more or less of a breach between them, which widens as time goes along, until one or both of them have but little or no regard for medical ethics, or each other. With just a little training or good advice from some older physician friend, all this might be avoided. But again there are certain courtesies due the young practitioner by the older men in the profession that are often overlooked, which no doubt in many cases is the cause of young men in the profession disregarding ethics and the esteem of other physicians, and becoming unethical men.

How gloomy the way often looks to the young doctor just starting out in the profession, without a location, probably without many friends, without money, and to think how much the advice and friendship is appreciated by these young doctors if given to them in the proper way by older physicians! We believe it is our duty to hold out a helping hand and to strive to show all courtesies possible to the younger men in the profession, with a view of not only promoting their financial benefit but towards making them more useful in their professional lives. We do not believe that we have ever made a complimentary remark, which we have always done if we had anything to say regarding the other physician, but what there came to us a feeling of good fellowship, and of a satisfaction that we had conferred not only a favor on the doctor of whom we had spoken but that we have raised ourselves in the estimation of the one so addressed.

Have we not all noticed the fact that most every physician has his closest and probably bosom friend in the person of another physician, but that that other physician lives in another town? Why not have this dear friend or friends in the person or personage of all neighbor physicians? As we have stated on many occasions, we believe most of the ill feeling and jealousies existing among the physicians of a community, town or city are due to misunderstanding, which may be from listening to gossiping individuals, who talk with or without intent to cause strife and bad feelings between physicians. We have striven for years to hold within our breast naught against any physician, and to disbelieve anything which might be calculated to do us harm. In fact, we try to forgive them before they commit this error, if committed.

Gentlemen, it is the best to cultivate that good feeling of fellowship toward your brother practitioner. If he makes a mistake which is calculated to do you harm, go to him, talk it over, give and take and be friends. It will give you much more happiness than it will to hold within thy breast ill feeling, jealousy and hatred. If your neighbor physician is inclined to not be on the square with you, treat him so well that he will be ashamed of himself. In this way good ethical men can often be made out of men who, with the least encouragement, would be to the contrary. And permit me to say, personally, we appreciate the friendship, the morning greeting of our neighbor physician, more than we do the friendship of any other citizen—yes, more than we do the smiles of the most beautiful woman.

VALUE OF HEALTHY CHILDHOOD*

CARL PUCKETT, M. D., Pryor, Okla.

As chairman of the Section on Diseases of Children I presume you expect me to deliver a sort of "keynote speech," bringing up a few questions for scientific discussion and in a manner suggesting a policy that I think this department of the Oklahoma State Medical Association should consider, to some extent, the coming year.

I am sure the subject I have chosen is a good one and the thought suggested therein should be uppermost in our minds in the treatment of children's diseases and our advice for their welfare, for we should not think only of the present but

*Chairman's Address, Section on Pediatrics, Oklahoma City, May 10, 1916.

of the future and what the finished product will be, or how well the future man or woman will be prepared for life. We are not so often called on for advice as to the shaping of the lives and habits of adults as children, for most mothers and fathers consider the future of their children of such importance that they try to start them right, possibly in a very feeble way, at least when some illness or possible permanent injury occurs, the question of what is best for the future or the best method to prevent permanent damage is of paramount importance, and the advice of the family physician is earnestly sought.

The trend of medicine and scientific thought is rapidly going in the direction of preventive medicine, and it is certainly more applicable in childhood than in any other period of our existence. Pediatrics has been called the "National Preventive Medicine," which certainly is an appropriate title. Of course most of us are not specialists in this branch of medicine, nor can we be in this state because of the few large cities, but to some extent as general practitioners we should devote special attention to the diseases of children. Since we have more of this to deal with than any other branch, our decisions are of more importance and our own success in gaining or holding the family practice very often hinges on whether or not we can make good with the children.

Too often children are turned over to the tender mercies of some "grandmother," supposed to know much about the ailments of children because she is the mother of several, despite the fact that two or three of these died in infancy, probably of preventable diseases. We should be able to diagnose children's minor disturbances and be able to give advice promptly and properly so that we may more effectively offset the notion, too prevalent, that old women with experience are the only ones that can care for children.

The importance of healthy childhood is now more generally recognized than ever before and much is being done for child welfare, but as yet it is only a beginning. The Children's Bureau of the U. S. Department of Labor is doing a great work in this line in their promotion of "Baby Week Campaigns" and "Child Welfare Exhibits," and their publication of booklets on Prenatal Care, Infant Care, Birth Registration, and Infant Mortality. Many of our state and municipal departments of health are doing effective work to promote healthy childhood and are in position to deal more directly with the individual. Virginia sends a bulletin on the care of the child to each mother as soon as the birth is reported to the state department of health, which in my opinion is a very effective way to reach the one who is in position to do most for the child.

We need to do something to give the babies a better chance in life, for when we know that about 300,000 die annually under one year of age in the United States, and fully three-fourths of these needlessly, it is time to give the matter some serious thought. We must not think that this is a necessary evil and that it is merely a process of weeding out the unfit, for children's diarrhoeas, bronchopneumonia, meningitis and the acute infectious diseases take the strong along with the weak. A necessary sequence to a high infant mortality rate is the larger number of children who, having weathered the storms of the first year, reach the haven of comparative safety of the other years of life in a battered, weakened and crippled condition such as forever handicaps them in becoming efficient men and women. The strength of the nation or state depends on the vitality of its citizens and this vitality depends, to a marked degree, on how fortunate the children have been in escaping the diseases of childhood and the consequent weaknesses, deformities and injuries. Also, malaria and hookworm may retard whole communities by sapping the vitality from childhood up and are regarded as the worst forms of insidious diseases. These diseases or afflictions are very degrading to man, causing physical inferiority, intellectual weakness and moral irresponsibility.

The highest function of the state is not to make millionaires out of a few importers or to find profitable investment for surplus wealth, but to advance to

the highest degree the health, intelligence and morality of its citizens. Health is first necessary and intelligence and morality follow. The greatest cause of destruction of races and the highly civilized nations of the past has not been the enemies from without but the internal enemy of disease. Chronic malaria is said to have caused the destruction of ancient Greece, and before this time came the destruction of Egypt by pestilence and malaria. The conquering of these diseases have in late years enabled us to build the Panama canal and make Cuba, Porto Rico and the Philippine Islands lands of wealth, good health, happiness and prosperity, instead of poverty and revolutions. These people are happier than ever before for the reason that their health is better and their morals are better for the same reason, and since the children's environment affords better opportunities for good health, future generations will be stronger.

A nation's moral tone is elevated with improvement in health. One who is proud of his health and strength, or who is an athlete, is of necessity a moral man because immorality and health are incompatible companions. Poverty and disease are twin evils and from each spring vice and crime. Poverty affects childhood more seriously than any other period of man's existence because this is the constructive period. Ignorance is responsible for most of the poverty. A little education and knowledge of hygiene and the human body is worth more to make our people prosperous and happy than any other factor. If a child is strong and robust he will be ambitious and optimistic; if he is puny from chronic malaria, bad hygiene, enlarged tonsils and adenoids or anything that interferes with his advancement, he is not likely to have the initiative that is necessary to make the most useful citizen. We must do our part by helping the poor and ignorant, for it is to our own good to do so as well as for the benefit of the state. The poor take our time more than any other class and are less able to pay us. We cannot prosper continuously above the community in which we live, so it is up to us to lift up the community for our own good as well as for the benefit of humanity. We must take a little time to instruct the mothers on the proper care of their babies, for we have opportunity to do so in practically every case. By insisting on regular nursing hours we prevent "three months colic" and kindred disturbances which can only be satisfactorily treated by proper nursing. Intelligent mothers are more satisfactory to deal with and it therefore is a good plan to encourage them to buy some good works on the care of children.

Since health, wealth and happiness are so closely allied it seems to me that large corporations could very profitably spend considerable sums of money on a health department. Improved hygiene and sanitation would make the employees more valuable whether the bad hygiene affected the individual employee or not, for if his family is continually sick and he is worried and loses sleep he is not able to render his best service. He merely puts in his time and draws his pay, while if he is well, robust and has the fullest possession of his faculties he is more likely to give a day's worth of work. I am sure that if railroad companies maintained an efficient health department that it would make their dividends greater. By making it a point to see that health and living conditions of their employees are the best obtainable, better service could undoubtedly be rendered, especially in the laboring department. If sanitary homes were provided and instructions as to the best means of maintaining them were given, a great humanitarian work would be performed that would do more for the children of employees than their parents, and at the same time the increased efficiency of the employees would more than offset the additional expense. Wrecks are often caused by tired or sleepy employees, and frequently the cost of one wreck would be greater than the annual expense of a health department. It has been my experience that much time and efficiency of railroad laborers have been wasted or impaired not so much because of their own illnesses but because of illness of their children, which destroys the employee's rest and comfort, of which sickness more than fifty per cent. could be prevented by sanitary houses and intelligent direction of home affairs.

Most railroad companies have available land for small sanitary homes and if what I have seen of bad hygiene, poor food, poor clothing and ignorance among railroad laborers is a fair sample of general conditions there is great need of general betterment among this class of laborers. The families need more medical attention than any other class of people and are less able to pay for it. I suggest the general health supervision of the families of employees because this of necessity will make better employees. I may be wrong in these opinions, but it seems to me that a corporation health department such as a railroad company or any other large corporation could maintain would be a great economic factor and develop future real men and women out of the children of the employees instead of raising puny, ignorant and indolent members of society. It is important that childhood be healthy so that the individual will be better able to meet the increased demands on his vitality in later life by our general advancement in knowledge and the necessary progress of civilization. The average length of life should be increased and the best way to produce this is to reduce infant mortality. Eight years can be added to the average lifetime by the adoption of present known methods of prevention of infantile diarrhoeas, broncho-pneumonia, lobar pneumonia, meningitis, typhoid and tuberculosis. We need this increased span of life because the period of preparation or education must be greater on account of increase of human knowledge and the necessity of greater skill and efficiency in all things. The span of life could be lengthened through insistence by the public on pure milk, pure water, pure air and reasonable protection from accidents.

Good hygiene and environment leave a beneficial effect on the future welfare and habits of the child. Bad air, poor food and clothing and squalid surroundings stunt a child physically, mentally, and morally. The bad moral effect is generally recognized as evidenced so often in stories and moving pictures by depicting a deformed child of the slums as the chief instrumentality in performing some villainous piece of work. If a child is poorly nourished, clothed and housed he is likely to be unhappy. Growing up in unhappiness makes him a pessimist and he feels that there is nothing good to which he can aspire. If he is only infected with chronic malaria or similar disease and has a reasonable amount of the necessities of life, he is probably growing up with a distorted view of life and the advantages and responsibilities of citizenship.

Malaria and attacks of tonsilitis are instrumentalities of torture to the growing child and he cannot free himself of these without intelligent help, and if allowed long to continue will leave a serious blight on his future life. We should see that our child patients are freed from these diseases and others of similar nature because they make him a prey to other permanent or acute fatal maladies. We should be careful to find the cause of certain bad habits of children since, too often, there is a definite physical cause. Frequently adenoids are responsible for dullness, poor appetite and general lack of interest. We must also remember that large tonsils and adenoids are the port of entry for tuberculosis, rheumatism, diphtheria and scarlet fever, and because of this insist on their removal when present. A large per cent. of all tuberculosis is contracted in childhood, probably on account of chronic colds from large tonsils, adenoids, bad hygiene and impure milk. Probably one-half the population acquire immunity during this period, while the others succumb to the more acute conditions of childhood or later show the chronic pulmonary type of tuberculosis of adults which is believed never to occur except in those who have been infected and rendered partially immune in childhood.

If we can keep in mind that probably eighty per cent. of all sickness in children is due either to faulty digestion or unhealthy throats, we are most likely to be able to head off serious and fatal sickness. We can insist on proper food and regular habits of nursing or eating. Much of the trouble of this nature is not due to the scarcity of proper food and the impossibility of regular feeding intervals, but to the fact that the parents are too ignorant to know the value of these things. Bad throats are often allowed to run on and make the child's life miserable, not on

account of the parents' inability to afford proper surgical work or to obtain other means of relief, but for the reason that they are not aware of the availability of immediate relief or are ignorant of the necessity of such relief.

In conclusion permit me again to urge that the future welfare of the children patients for whom we are called on to advise should be more earnestly considered when apparently minor disturbances are brought to our attention, especially if they be intestinal disorders or chronic colds or interference with normal respiration. Let us not forget that "as the twig is inclined so the tree will grow," and do our part toward making stronger and better men and women, for we have opportunity to do something when a little moulding or shaping will be far-reaching and lasting.

I avail myself of this opportunity of suggesting that we bend our best energies toward making and keeping the Section on Pediatrics what it should be, namely, one of the most important divisions of our State Association, for the reason that we are dealing with life when it is new and before the dawn of hope and ambition.

OKLAHOMA WORKMEN'S COMPENSATION LAW

A. A. McDONALD, Chairman of the Oklahoma Industrial Commission, Oklahoma City.

Mr. Chairman and Gentlemen of the Oklahoma Medical Association: It was with some misgivings and hesitation that I accepted your invitation to address you on the question of fees under the provisions of the Workmen's Compensation Law of Oklahoma. I have spent my entire life practicing one of the learned professions and I have the same feeling you no doubt entertain of the impropriety of a layman placing a valuation on my professional services. However, as President Cleveland once said, we are facing a condition and not a theory. I am here trusting that by a fair discussion no harm can come from my presence and entertaining a hope that a better understanding will result.

Not with a view of boring you or taking the long way around to reach what I really have to say, I must in a brief way outline to you some of the theories of a Workmen's Compensation Law in order to clearly and frankly state to you actual conditions that are confronting the employers, insurance companies, the State Industrial Commission and the people of Oklahoma.

While this is a new law to Oklahoma, it has been in force in Germany over a third of a century. Such laws have been adopted in every nation in Europe but Turkey and Switzerland, in most of the British dominions beyond the seas, Japan and thirty-two States of the American Union. It is assumed that in all hazardous industrial activity there is a certain inevitable toll of human life and limb as there is in broken machinery and equipment; that when a piece of machinery is broken it is replaced or repaired by the factory and the cost thereof is reflected in the price of the finished products. Under the common law the liability of the master for an accident to his servant only existed when predicated in some negligence of the master. No liability existed where the servant contributed to the negligence, where he was injured by an act of a fellow servant or where the danger was apparent and he was deemed to have assumed the risk. So when a workman suffered an injury for which there was no liability against the master, he was forced to exhaust his savings if he had any, become a burden to friends or relatives or a charge of the State and society.

It is argued for a compensation law that as these accidents are inevitable, that the industry in which they are sustained should bear the burden, therefore it is enacted that the liability of the master is fixed and the defences of contributory negligence, assumed risk and the fellow servant doctrine are abrogated and all accidental injuries arising out of and in the course of employment shall be compensatable without regard to fault as a cause of such injury except when

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the employee wilfully hurts himself, refusal to use a safety appliance, or the injury results directly from intoxication while on duty.

The compensation allowed the injured workman is not paid as damages but as partial remuneration for his loss of earnings. Under our law compensation starts on the fifteenth day after the injury at approximately half wages, limited however to a maximum of ten dollars a week and a minimum of six dollars. Medical attendance, as you are no doubt aware, is provided by the employer for the first fifteen days after the accident.

The advantages of this system over the old is, it insures an injured workman prompt medical treatment and allows him half time after the first two weeks without any expense to him in procuring it. It eliminates the waste that formerly went to court expense and attorneys fees and it gives prompt relief. For the employer it relieves him of damage suits in which frequently excessive verdicts were rendered.

Then in order to secure the payment of this compensation from financially weak employers and for the further purpose of making this charge on the industry cover the entire industry, the employer is required to insure his risk. The Insurance Company in this, under the supervision of the State Insurance Board, collects a premium on each one hundred dollars pay roll. The cost of this insurance being thus based on pay roll exposure, an employer can figure its cost and properly apportion it in the cost of the production of a barrel of oil, a ton of coal, manufacture of a thousand feet of lumber, or any other finished product manufactured or produced. These rates are based on actual experience. The rates are raised or lowered as experience demonstrates their worth. I call your attention to this particularly, for if you ever feel in fixing a fee that it is an insurance company that is going to have to pay, remember your charge will ultimately enter into the rate and will then fall on the employer in an increased rate and he in turn will have to recoup from the public or ultimate consumer.

Section 4 of Article 2 of the Oklahoma Workmen's Compensation Act reads as follows:

"Section 4. The employer shall promptly provide for an injured employee such medical, surgical or other attendance or treatment, nurse and hospital service, medicine, crutches and apparatus as may be necessary, during fifteen days after the injury. If the employer fails to provide the same the injured employee may do so at the expense of the employer. The employee shall not be entitled to recover any amount expended by him for such treatment or services unless he shall have requested the employer to furnish the same and the employer shall have refused or neglected to do so. All fees and other charges for such treatment and services shall be subject to regulation by the Commission as provided in Section 14 of this article, and shall be limited to such charges as prevail in the same community for similar treatment of injured person of a like standard of living; provided, the employer shall not be liable to make any of the payments provided for in this section, in case of a contest of liability where the Commission shall decide that the injury does not come within the terms of this Act."

This section, you will note, attempts to give an injured employee complete medical attendance during the first fifteen days after the accident. The fees allowed your profession for such services, however, are not those which you could charge the president of an insurance company in Baltimore or New York, but are limited to such charges as prevail in the same community for similar treatment of injured persons of a like standard of living. This, of course, means that in fixing your fee for treating an employee who earns two dollars per day you should charge the same when he is injured under the Workmen's Compensation Law

as you would charge him if he received an injury outside the course of his employment.

This same section gives the State Industrial Commission authority to regulate such charges and fees. I am frank to confess it is an embarrassing duty. We have had a good many disputes to settle between physicians and insurance companies. Nearly all cases coming under our jurisdiction from a medical viewpoint are surgical cases. I know there cannot be a uniform fee in all surgical cases, especially in the after treatment. Some cases heal more rapidly than others and each has its own peculiar features. Still, on the whole, there is not room for a very wide divergence in the fees for a given injury. If the profession would adopt a uniform charge in the long run it would even up. Personally I favor in all cases of amputation, fractures, dislocations or operations a flat fee to cover all after treatment. It would be to your advantage, as that would not limit you to pay from the insurance company for only fifteen days. I notice in several states where the commission that administers the law has fixed a fee schedule that the fees are on such a basis.

I know some doctors have attempted to overcharge. I also know that some insurance adjusters have been equally unfair in attempting to "jew" doctors down below what is a legitimate fee. But I am very glad to say that in probably 80 per cent. of all cases no knowledge of a disagreement or dissatisfaction has ever come to us. For some reason nearly every case in which we have been called upon to pass on the injury in some manner was connected with the production or manufacture of oil products. This can possibly be explained by the fact that oil workers are the best paid laborers in the State, that the cost of living is higher there than elsewhere and all classes including even your profession are inoculated with the idea of getting rich quickly. The Commission have taken these things into consideration in all cases from oil towns. But at that we have had to do some very heavy slashing to bring bills in reason. One case is now before us where a bill for medical attendance and hospital services amounts to \$580.00 for fifteen days. Under present rates no company can do business in this state with such bills.

I have not been in favor of the Commission establishing a flat fee schedule for the simple reason that the services of all doctors are not of the same value, as is true in all other professions, trades or occupations. A young doctor just out of medical school is not entitled to the remuneration of a Mayo or a Murphy for the same operation. However, I believe the insurance companies would like to have one established and if this body would indicate a like desire the Commission will establish one.

Insurance companies have for some time contended that medical fees are higher in this state than any other compensation state. I have made some investigations and have examined fee schedules in other states and I must confess I have arrived at the same conclusion.

We have not had much trouble in hospital charges. We feel the price for a room should be graded as a hotel and if a patient is placed in a twenty-five dollar a week room it is no fault of the hospital that a fifteen dollar a week room was not asked for when it would have done as well. We do feel that a fee in excess of five dollars for use of the operation room and a like fee to administer an anesthetic is unreasonable and out of line with even the best hospitals. One hospital bill we reviewed had six items each for two cents, being for morphine, castor oil and Hinkle pills. I suppose if it had not been in the winter time there would have also been charges for so many glasses of ice water.

Now, as I have said before, the great majority of your profession have been absolutely fair and to the small minority I want to make an appeal for the sake of humanity to get right in your charges. The Commission is more than anxious to be fair to you. Under our oaths we must be fair to insurance companies and if we are not it means an increased insurance rate for which the four thousand em-

ployers of the state will have a righteous cause of indignation, and when they in turn try to make it back from the public everybody is hurt. All classes must make some sacrifices to aid the unfortunate. It is costing the employers more than the old system. My profession are entirely eliminated from a field that was once one of great remuneration. So is it asking too much of you when I only ask you to be reasonable and just? You should never forget one other proposition and that is your collections from your practice usually have a higher percentage of loss than any other, but for services rendered under this law during the first fifteen days you collect one hundred per cent.

This law is the greatest humanitarian measure ever adopted in Oklahoma. The Industrial Commission is doing its utmost to administer the law both according to the letter and the spirit, and I close feeling confident that the appeal to the profession that does more to alleviate human ails and suffering, has not fallen on deaf ears.

REPORT OF LEGISLATIVE COMMITTEE

Presented by Dr. W. T. Salmon, Secretary, Oklahoma City

It has been generally supposed that the Legislative Committee has no duties to perform except when the State Legislature is in session, and it has been the custom to be inactive, therefore no report was made only of labors in the legislative bodies and suggestions of what should be done in the future.

These reports have usually, when presented at all, been read to only such members of the council as cared to listen and then are rushed through as unimportant business, published as committee reports and are doubtlessly read by less than 40 per cent. of the members of the State Society.

Your Legislative Committee realizes the stupendous undertaking that is assigned them, and how utterly impossible it is to cope with the many obstacles in our present state of unpreparedness.

We realize it is a waste of time and money for a few men to await the meeting of the Legislature and in so brief a space to hope to accomplish such important measures that have taken other states almost a half century to enact.

While we are waiting for the enemy to strike, we think it necessary to instruct our own army so that when we must give battle we can present a phalanx worthy of any foe. Each member of this society has an important part to act, and without your hearty co-operation we shall always be second in action and the results shall always be doubtful or against us.

When we stand as a unit, holding up the banner of Truth and Progress, worthy of recognition, the intelligence and enlightenment of the entire civilization will step in the helm and the journey will be finished in triumph. For years we have kept up a desultory struggle, and our gladiators have met in the arena every ism that an imperishable charlatan can conceive, but we have never presented an organization more worthy of recognition than Coxey's Army. The results that have been achieved have been through the efforts of few, and not through combined organization.

From a financial standpoint we doubt that the laws that we have asked for would be of benefit, for the quack and charlatan break down the hygienic laws that have been created for the prevention of diseases; they perform criminal abortions and various crimes from which the medical profession may derive a revenue; but they also make the plane of respect upon which we stand. We cannot elevate them, but we must descend to the depth to which every tyro called "Doc" establishes in his community.

For this reason we advise the prosecution of every person who is illegally practicing medicine, or treating the sick in the state of Oklahoma, and that each county society appoint a committee for this purpose; that these committees be made to report at every meeting, and when it is ascertained that they are derelicts

to duty that others be appointed that will act. A test case, for the correct interpretation of the laws, is now being conducted before Judge Oldfield and if found that the laws are favorable, a blanket injunction, covering the entire state, may be instituted.

For the purpose of raising funds to conduct the test case, your Secretary sent a request to each county society of the state, and the following is a correct report of same:

Feb.	14—Woods Co.	Dr. O. R. Gregg, Sec., Alva	\$10.00
"	14—Kiowa Co.	Dr. A. L. Wagoner, Sec., Hobart	10.00
"	15—Caddo Co.	Dr. Chas R. Hume, Sec., Anadarko	10.00
"	16—Kay Co.	Dr. A. B. Risser, Sec., Blackwell	10.00
"	16—Washington Co.	Dr. Jas. G. Smith, Sec., Bartlesville	10.00
"	16—Rogers Co.	Dr. Walter A. Howard, Sec., Chelsea	10.00
"	16—Oklahoma Co.	Dr. F. B. Sorgatz, Sec., Okla. City	25.00
"	17—Tulsa Co.	Dr. J. W. Rodgers, Sec., Tulsa	10.00
"	17—Canadian Co.	Dr. W. J. Muzzy, Sec., El Reno	10.00
"	17—Muskogee Co.	Dr. J. G. Noble, Sec., Muskogee	10.00
"	22—Texas Co.	Dr. R. B. Hayes, Sec., Guymon	10.00
"	25—Comanche Co.	Dr. G. Pinnell, Sec., Lawton	10.00
March	3—Custer Co.	{ Dr. S. C. Davis, Sec., Weatherford	10.00
		{ Dr. M. C. Comer, Weatherford	
"	6—Cleveland Co.	Dr. Gayfree Ellison, Sec., Norman	10.00
"	15—Latimer Co.	Dr. E. B. Hamilton, Sec., Wilburton	10.00
"	16—Beckham Co.	Dr. J. E. Yarbrough, Sec., Erick	10.00
"	24—Logan Co.	Dr. E. O. Barker, Sec., Guthrie	10.00
Total			\$185.00
Cash received from other sources			75.00
Total cash			\$260.00
April	5—Cash for bond in suit filed		\$ 10.00
	Attorneys fees to date		165.00
	Stamps, Stationery		5.00
	Jno. F. Burford, Detective Service		10.00
May	6—Cash for Transcript of testimony		30.00
Total			\$220.00
Balance on hand			\$40.00

It is a pleasure to record the cheerful replies, many of which declared a willingness to send more money if needed. It was fully understood that many of the counties would not respond, some from lack of organization, some from a doubt that such suit would be of benefit and various and sundry reasons. I am sure that many other counties will respond to this request as soon as they are convinced they are aiding a worthy cause. It costs money to conduct these suits, but I am confident that this state will be cleared of charlatans if the present plans are pursued.

We desire to call to your attention that the opticians are claiming, throughout the state, that they have been delegated by the school board or some other authority to examine school children; that this is dangerous to the welfare of those who need skillful diagnosis and treatment; that the optometric laws are absurd, and that any physician who lends them assistance is guilty of a great breach of ethics, and at the same time is publishing his own ignorance.

We recommend the following amendments to our present laws:

An Act to amend Section 6910, Article VII, Chapter 67, Revised Laws of the State of Oklahoma, 1912, by Harris & Day, by adding subsection 3 and to repeal Section 6914, Article VII, Chapter 67, of the same.

Be it Enacted by the People of the State of Oklahoma:

Section 1. That Section 6910 of Article VII, Chapter 67, the Revised Laws of the State of Oklahoma, 1912, by Harris & Day, be and the same is hereby amended as follows:

Section 2. The following persons shall be deemed as practicing medicine and surgery within the meaning of this Article:

First. Those who prescribe or administer any drug or medicine now or hereafter included in materia medica in the treatment of disease, injury or deformity of human beings, or who profess publicly to be physicians and to prescribe for the sick.

Second. Those who practice major or minor surgery in the treatment of disease, injury or deformity of human beings, except dealers in surgical, dental, or optical appliances.

Third. It shall be unlawful for any other person to profess publicly to treat disease, injury, or deformity of human beings, or who does treat disease, injury or deformity of human beings in any manner whatsoever, either by remedies now or hereafter included in materia medica, or by adjustment of the spinal column, or by any other manual treatment not otherwise permitted and provided for by law.

The doing of any of the acts in this section mentioned shall be taken as prima facie evidence of an intent on the part of the person doing any of the said acts to represent himself as engaged in the practice of medicine or surgery, or both. But nothing in this article shall be so construed as to prohibit the service in the case of emergency or the domestic administration of family remedies; nor shall this act (article) apply to any commissioned medical officer in the United States army, navy or marine hospital service in the discharge of his professional duties, nor to any legally qualified dentist when engaged exclusively in the practice of dentistry, nor to any physician or surgeon from another state or territory, when in actual consultation with a legal practitioner of this State, if such physician or surgeon is, at the time of said consultation, a legal practitioner of medicine and surgery in the state or territory in which he resides, nor to any physician or surgeon residing on the border of a neighboring state and duly authorized under the laws thereof to practice medicine and surgery therein, whose practice extends within the limits of this State, providing that such physician or surgeon shall not open an office or a place to meet patients or receive calls within the limits of this State.

An Act to amend Section 2519, Chapter 23, Article XLIII, of the Revised Laws of the State of Oklahoma, 1912, by Harris & Day.

Be it Enacted by the People of the State of Oklahoma:

Section 1. That Section 2519, Chapter 23, Article XLIII, of the Revised Laws of the State of Oklahoma, 1912, by Harris & Day, be and the same is hereby amended as follows:

Section 2. (a) The following persons only shall be deemed as practicing medicine and surgery.

First. Those who prescribe or administer any drug or medicine now or hereafter included in materia medica in the treatment of disease, injury or deformity of human beings, or who profess publicly to be physicians and to prescribe for the sick.

Second. Those who practice major or minor surgery in the treatment of disease, injury or deformity of human beings, except dealers in surgical, dental, or optical appliances.

Third. It shall be unlawful for any other person to profess publicly to treat disease, injury, or deformity of human beings or who does treat disease, injury or deformity of human beings in any manner whatsoever, either by remedies now or hereafter included in materia medica, or by adjustment of the spinal column, or by any other manual treatment not otherwise permitted and provided for by law.

And any person who so professes publicly to treat disease, injury or deformity of human beings, or who does treat disease, injury or deformity of human beings in any manner whatsoever, either by remedies now or hereafter included in materia medica, or by adjustment of the spinal column, or by any other manual treatment not otherwise permitted and provided for by law and herein prohibited by subsection Third is guilty of a misdemeanor.

(b). Any person not a physician while in a state of intoxication, who shall prescribe any poison, drug or medicine to another person, shall be punished by imprisonment in the county jail not more than one year or by fine not exceeding five hundred dollars.

REPORT AND RECOMMENDATIONS OF COMMITTEE ON FIRST AID

To The Members of the House of Delegates of the Oklahoma State Medical Association.

Your Committee on First Aid present the following report:

1. Owing to the comparative recent appointment of the Committee we have been unable to report much accomplished further than to report what is being done in the state in the matter of first aid and to make certain recommendations as to the work for the future.

2. We find that some of the larger railroad lines of the state are taking great interest in teaching their employees the principles of first aid and are also furnishing them with suitable first aid packages to use in dressing the injured men. This is especially true of the Rock Island and at each division point there have been classes formed which have been carefully instructed by the local surgeon at that point as to the methods to pursue in all sorts of emergencies while waiting for the physician to arrive.

As men move away new men are secured to take their places in the class and a new series of lessons given.

3. We find this is also true to some extent of the large mining companies, but just how far the matter has gone we were unable to determine.

Recommendations

1. We recommend that a standing committee on first aid be continued.

2. We recommend that this Association endorse a movement to have first aid taught in each high school in the state by inviting some physician in each city or town where such high school is situated to deliver a series of lectures and demonstrations to the students during class hours on first aid.

3. We recommend also that in each town where there is a factory or mill or other enterprise employing any considerable number of men, and in each mining community, that the Association endorse and urge the organization of such first aid classes under the direction of some member of the State Association.

4. In order that the instruction may be uniform we further recommend that the first aid committee be authorized to prepare a small pamphlet giving very briefly the outline of the work to be taught and that these be published by the State Association and furnished to the members teaching the classes without expense to themselves.

5. We further recommend that the Chief Surgeon of each railroad or mining company in the state be requested by the first aid committee to lend his aid and influence to assist in the organization of first aid classes wherever they may be practicable and the need for the same exists.

Respectfully submitted,

FRED H. CLARK,
CHAS. BLICKENSDECKER,
JAMES C. JOHNSTON

Oklahoma City, May 10, 1916.

REPORT OF COMMITTEE ON TUBERCULOSIS*

As Chairman of your Committee on Tuberculosis, I desire to submit the following report:

The work of this committee has been necessarily limited, and to a certain degree disappointing: First, because no funds are provided for this important work, and, second, because there has been a seeming lack of interest and co-operation on the part of many of the County Societies.

In December, 1915, the committee on tuberculosis mailed seventy letters to the Secretaries of County Societies requesting that each society devote at least one regular meeting to the study of tuberculosis with special reference to early diagnosis, that they appoint members to make public address on the subject of tuberculosis, and that the action of each society be reported to the committee before April 1st, 1916.

From the seventy letters the committee has received only three replies with reports of special meetings. However, in addition to the three counties making such reports, the Chairman of the committee was invited to attend special meetings on tuberculosis in six different counties. At all these meetings there was a good attendance and a great deal of interest shown.

In addition to this effort to get this subject before the profession through the County Societies, the committee, in co-operation with the Chairman of the Section on Medicine, has provided an instructive symposium on tuberculosis for this meeting, which should be heard by every member of the Association.

With apologies for the meager accomplishments of this committee, you are respectfully requested to consider the following recommendations:

First: That every physician in the state should remember that tuberculosis concerns him not only as a physician but as a citizen, and that he should have a working knowledge of its sociological phases, as well as its medical side.

With this in view, it becomes the duty of the physicians of the state to inaugurate a campaign for the further education of the public along lines of social reform, proper housing, the adjustment of habits and customs in keeping with modern ideas of sanitation, to bring about desirable legislation and governmental aid.

These ends should be accomplished by widespread and persistent publicity through the press and by means of public lectures and instruction in the public schools.

Second: That every physician in the state should study diligently the methods of early diagnosis and the proper management of this disease.

* It rests largely with the family physician as to whether the tuberculous individual is given ten chances to one for recovery, or one chance in ten. The average layman today knows that this is true; he knows when he gets a thorough examination, and as a rule he is willing to pay a reasonable fee for the same. The public is rapidly acquiring much needed knowledge concerning tuberculosis and an enlightened public is not going to be particularly charitable toward the physician who, through carelessness or ignorance, contributes to the sum total of useless suffering and loss of life.

Until the spread of tuberculosis is greatly reduced, of all diseases, it should be the most remunerative to the family physician, if diagnosed and properly managed. So, leaving out of consideration the altruistic phase of this problem, it behooves the physician to prepare to meet the needs and demands of an educated public. In other words, it resolves itself into a question of self-preservation.

Third: That the medical profession should comply with the present law making tuberculosis a reportable disease.

*Reported by Dr. L. J. Moorman, Chairman, Oklahoma City, May 11, 1916.

Fourth: That the medical profession should seek to bring about legislation providing for either county or district sanatoria for the isolation and treatment of tuberculosis.

It is, on an average, about ten times cheaper for the state to cure a patient with tuberculosis than to let him die, so there is a practical tax-payer's consideration here.

The committee recommends county or district sanatoria because they prove more effective in the control of this infection. The transportation is less; the patient is not so far removed from home and loved ones, and is more apt to remain in the institution until his trouble is arrested, or, if incurable, through that lingering period when he is most dangerous to those about him.

The committee further recommends that the isolation of open cases be made compulsory, either in an institution, or under proper appointments in the home, and that those cases remaining at home be under governmental inspection, and that such patients be forced to enter a sanatorium, if it is found that they are not complying with the rules and regulations under which they are permitted to remain at home.

Bernard Bang, in the State of Denmark, has shown conclusively that tuberculosis in herds of cattle can be eradicated by the control of housing conditions, the removal of infected cattle and the protection of the newly born throughout life—thus proving that the tubercle bacillus is not ubiquitous.

In Victoria, Australia, the doctor is paid \$2.50 for every case of tuberculosis reported, and under regulations similar to those outlined above they have succeeded in stamping out tuberculosis. Why not do it in Oklahoma?

L. J. MOORMAN,

Chairman of Committee on Tuberculosis.

RESOLUTIONS COMMITTEE REPORT—HOUSE OF DELEGATES

Be it Resolved: That the Oklahoma State Medical Association most thoroughly appreciates the fine and ample facilities furnished for our meetings as well as for the splendid and varied clinics presented at the different hospitals by the Oklahoma County Medical Society, and the physicians of Oklahoma City.

Be it further Resolved: That we most heartily appreciate the elaborate supper served at the Lee-Huckins as well as the entertainment furnished at the Liberty Theatre by the profession of Oklahoma City.

We further appreciate the fact that the meetings are all so amply provided for, and held in one building, instead of being scattered over the city in various places.

Be it Resolved: That we wish to compliment our officers on the progress they have made in the development of the defense feature of our Association, and we wish to encourage them in jointly arranging to defend the holders of indemnity insurance policies with the old line companies, such as has already been contemplated, or has already been almost perfected with the Medical Protective Company of Ft. Wayne, Ind.

Be it Resolved: That we compliment the Secretary-Treasurer on the condition of our finances, and the way he has conducted the business side of the Association, and on his untiring efforts for upbuilding of the organization of medicine in the state of Oklahoma.

JOHN W. DUKE,

G. A. BOYLE,

A. W. WHITE,

F. M. ADAMS,

W. A. TOLLESON,

Committee.

NECROLOGICAL REPORT

To the President and Members of the Oklahoma State Medical Association:

"For they are dead and we must yearn therefore."

Since our last annual meeting it has pleased the Supreme Being to call from our ranks C. N. Frazier, Hugo, Choctaw County; John Morris, Sallisaw, Sequoyah County; G. G. Fisher, Bokehito, Bryan County; C. M. Compton, Coyle, Logan County; W. W. Brown, Cameron, LeFlore County; R. L. Morrison, Poteau, LeFlore County; Ed. A. Mayberry, Enid, Garfield County; Walter L. Capshaw, Norman, Cleveland County; J. R. Dixon, Sugden, Jefferson County; M. E. De Groat, Alva, Wood County; J. Mooney, McLoud, Pottawatomie County; J. C. Terrell, Durant; F. C. Norris, Coleman, and Ed. D. Meeker, Lawton.

This hour today has the dignity and the tenderness of funeral rites without their sadness. It is not a new bereavment but one which time has softened. We meet not around a newly opened grave but pay our tribute to those which nature has already decorated with the memories of her love. Above every tomb her daily sunshine has smiled, her tears have wept; over the humblest she has bidden some grasses nestle, some vines creep, and the butterfly—ancient emblem of immortality—waves his little wings above every sod. To nature's signs of tenderness we add our own. Not "ashes to ashes, dust to dust," but blossoms to blossoms, laurels to the laureled. Sacred associations make this hour sweet. Time but enriches its memories. What a wonderful embalmer is death! We who survive grow daily older. Not so with the departed; they are embalmed forever in our imaginations! They will not change; they will never seem to us to be any different than when they answered their last call. It is we alone who shall grow old. And again, what a wonderful purifier is death? Those who have gone before us varied in character. Like other men, they had their strength and their weaknesses, their merits and their faults, yet now all stains are washed away. Their life ceased at its climax, and the ending sanctified all that went before.

And we, colleagues, who recall the lives of these men, their untiring sacrifice, their complete surrender to the alleviation of human suffering, do we not hear in the soft air of this May day, far above the riot of the noisy street, the benediction that they could not hear: "Inasmuch as thou hast done it to the least of these, My brethren, thou hast done it unto me."

The great French soldier, La Tour D'Auvergne, was the hero of many battles, but remained by his own choice in the ranks. Napoleon gave him a sword and the official title, "First among the grenadiers of France." When he was killed the Emperor ordered that his heart should be entrusted to the keeping of his regiment; that his name should be called at every roll call, and that his next comrade should make answer, "Dead upon the field of honor." In our memories are the names of many of our departed brethren. We treasure all their hearts and when the name of each is called we answer—"Dead upon the field of honor."

Respectfully submitted,

CHAS. W. HEITZMAN,
JAMES W. POLLARD,
MARTHA BLEDSOE,

Committee.

REPORT OF SECRETARY-TREASURER-EDITOR

To the House of Delegates and Members of the Oklahoma State Medical Association:

I herewith submit a report of the transactions of my office for the year ending with May 1, 1916. A statement in detail covering all matters of receipts and expenditures has been submitted to the Council.

Membership: The year just ending has been remarkably successful from the standpoint of membership. This has been largely due to the hearty co-operation on the part of county secretaries, who in almost all instances have been alert in looking after the interests of their membership, which at this time is of more importance than ever before, as the failure to report a member promptly might be the cause of considerable financial loss to the member.

Finances: Our finances are in good condition. Notwithstanding the fact that during the past year we have had to meet some considerable unusual expenses, we have saved a nice sum of money and at the same time maintained the high excellence of our publication from the standpoint of taste and general make-up.

Medical Defense: On July 1, 1915, the Defense Committee began the establishment of the medical defense feature which, as you know, is already in force in California, Illinois, Maryland, Iowa, Kansas, Kentucky, Indiana, Massachusetts, Michigan, Minnesota, Mississippi, Missouri, Nebraska, New Jersey, New York, North Dakota, Pennsylvania, Texas, Vermont, Washington, West Virginia and Wisconsin. There was some protest in a few instances from some members on this matter, and as the time from July 1st to December 31st was optional with the member, it did not become a part of the membership dues until the first of January. On April 30, 1915, we had 1324 members. On April 30, 1916, we had 1305 members; a loss of only 19 members. This has been very gratifying to the officers, as a much greater loss might have been reasonably expected. We believe that the Medical Defense Committee should have every help in the establishment and inauguration of medical defense, which is an action looking toward the protection of the entire profession. The small added contribution for which it calls will not hurt anyone. The disposition to regard this as insurance and to quibble over the legal rights of the member under it, seem to be ill advised at this time. It is not insurance but a mutual organization to defend one another from unjust attack, the object being to lessen the character of suits, most of which, as is well known are entirely without merit but require the same amount of painstaking intelligence and defense as if they were meritorious. There seems to be a misunderstanding as to what cases will be defended. From the very reason that many legal technicalities had to be considered, it was deemed best for the Committee to reserve the right as to what cases it would defend. This reservation is made in other states and is placed there in our case for the protection of all the members from any unusual condition that could not be anticipated and covered in the warranties; however, it may be said that your Committee undertakes to defend any action that would ordinarily be defended by an indemnity insurance company.

Your Committee is seeking to make arrangements to jointly defend, where necessary, the holder of indemnity insurance policies, and a tentative or working arrangement has been about completed with the Medical Protective Company, Ft. Wayne, Indiana. This Company is thoroughly in sympathy with the establishment of Medical Defense by this and all other Medical Associations, believing that it will eventually lessen such suits. A well known old line company now charging \$35.00 for these policies has offered to write what is known as "group insurance policies" on such members of our Association as want it at the rate of not less than 100 members; annual premium \$20.00; over 200 members, annual premium, \$17.50.

We ask that the members be patient and assist us in working out the details of this matter which is for the good of all of us.

Deaths: Our Association has lost by death 14 members since our last meeting. Proper and fitting tribute to their memory will be made by the Necrology Committee. Thirty-eight members have moved from the State, according to incomplete reports of the county secretaries.

**CONDENSED STATEMENT OF RECEIPTS, EXPENDITURES AND BALANCES
FROM MAY 1, 1915, TO APRIL 30, 1916, INCLUSIVE.**

Receipts.	
Balance April 30, 1915.....	\$1680.02
From County Secretaries.....	4763.00
From advertising.....	1805.79
Interest, time deposit, Commercial National Bank.....	48.35
	<hr/> \$8297.16
Expenditures.	
Telephone, telegraph, express, petty office supplies.....	50.30
Postage.....	125.72
Printing Journal, stationery, etc.....	2437.12
Stenographic and clerical work.....	393.00
Reporting annual meeting.....	91.75
Councilor, delegates and committee expense.....	522.96
Refunds, county secretaries, advertisers.....	48.70
Secretary's salary.....	600.00
Press clipping bureau.....	27.50
Treasurer's bond.....	10.00
Auditing books.....	7.50
American Medical Association, organizers, digest.....	177.00
Transfer to Medical Defense Fund.....	1280.00
Certificate deposit, Commercial National Bank.....	1000.00
	<hr/> \$6771.55
Cash on deposit May 1, 1916.....	\$1525.61
Certificates of deposit 4 per cent.....	2000.00
	<hr/> \$3525.61
Total cash resources, Medical Association.....	<hr/> \$3525.61
Medical Defense Fund	
Total receipts July 1, 1915 to April 30, 1916.....	\$1498.00
Expenditures, Attorney and deduction.....	32.00
	<hr/>
Balance, cash.....	\$1466.00
TOTAL RESOURCES, CASH.....	<hr/> \$4991.61

Respectfully submitted,
C. A. THOMPSON, Secretary.

**Transactions of The House of Delegates, Twenty-Fourth Annual Meeting,
Oklahoma City, May 9, 1916.**

Call to Order by the President, Dr. J. Hutchings White. A committee on Resolutions and Credentials composed of Drs. J. W. Duke, G. A. Boyle, A. W. White, F. M. Adams and W. A. Tolleson was appointed. (For report of Resolutions Committee see under committee reports, this issue).

A resolution was adopted that the President be authorized to appoint a credentials committee before each meeting, at such time as he may see fit, for the purpose of expediting the work of the House of Delegates for avoidance of the delay incident to awaiting for report of such committee.

By-Laws, Chapter 8, Section 1, Committees, was offered to read as follows: The standing committees shall be as follows: A committee on Public Policy and Legislation; a committee on Medical Education and committees on investigation of matters of interest to the public and medical profession. All such committees shall be appointed by the President.

Amendment to the By-Laws, Chapter 9, Section 14, was offered as follows:

Line 3 changed to read "February 1st of each year," which would make the section read, "Section 14. Any county society which fails to pay its assessment, or make the report required, on or before February 1st of each year, shall be held as suspended, and none of its members or delegates shall be permitted to participate in any of the business or proceedings of the Association or of the House of Delegates until such requirement shall have been met."

Constitution, Article 9. A new section number 4 was added reading as follows: "In the first meeting after the adoption of this amendment, a president and a president-elect shall be selected by the House of Delegates; the president to assume immediate charge of office, and the president-elect to assume active charge of office one year following the date of his election; and at every annual election thereafter there shall be selected a president-elect who shall assume his duties one year from the date of his election."

Constitution, Section 4. An amendment was presented to lie over one year providing above constitutional section be amended to read: "When a member of any component society moves into another county of this state he shall be amenable to and automatically become a member of the society of the county of which he is a resident."

A tentative proposition from the United States Fidelity and Guarantee Company, through their Agent, Mr. W. B. Butz, was presented, which in substance proposes to write indemnity insurance for members at the rate of, for 200 or more, \$17.50; for 100, \$20.00; to make certain added warranties not now generally incorporated in such policies; to automatically make such policy ineffective with the termination of membership of the holder, returning to him the unearned premium, etc. This was referred to a committee consisting of Drs. Horace Reed, F. H. Clark and S. E. Mitchell for investigation and report.

The committee on first aid, through the Chairman, Dr. F. H. Clark, made a verbal report of progress to date. Dr. Clark stating that owing to limited time since organization not a great deal had been accomplished but that certain steps were in contemplation to organize for effectual work.

See full report preceding. Adjourned subject to call or to May 11.

Thursday, May 11, 8:30 A. M.

Call to order by the President; reading minutes of previous session.

The election of officers being the next order, resulted in the following: President, Dr. Charles R. Hume, Anadarko; president-elect, Dr. W. Albert Cook, Tulsa. Vice-Presidents, Drs. Fowler Border, Mangum; A. R. Lewis, Ryan; Horace Reed, Oklahoma City.

Vacancies in the first, fourth, sixth and twelfth councilor districts were filled as follows:

First, Dr. J. M. Workman, re-elected.

Fourth, Dr. G. A. Boyle, Enid.

Sixth, Dr. C. M. Maupin, Waurika, re-elected.

Twelfth, Dr. L. S. Willour, McAlester, re-elected.

Delegate to the American Medical Association, Dr. M. A. Kelso, Enid.

Meeting place for 1917, Lawton-Medicine Park.

Dr. Horace Reed called attention to the illness of Dr. Walter Penquite and a committee composed of Drs. McLain Rogers, W. Albert Cook and L. S. Willour were appointed to pay the respects of the House to Dr. Penquite. The report of the committees on Neurology and Resolutions were read and ordered adopted.

The committee on Indemnity Insurance report was made verbally by Dr. Horace Reed and follows, with the action taken thereon.

Dr. Reed: This report is not made in full for the reason we do not think all the members will be vitally interested in it. It cannot be made a society matter.

However, the conditions are such that in order to be eligible as a member a certain number be guaranteed, he must be a member of the association, one interested to that extent, so we wish to call your attention to certain features of the proposition as it appears to your committee.

One of the features which we think of as one that would probably work some difficulty, is the working of the machinery of such an organization might be somewhat cumbersome. You remember a committee of five is called for before a settlement could be made regarding the filing of a suit, one by the assured and one by the company. It is not just exactly plain how the three, at least, are to be selected.

We suggest that if we go into this matter as a group that some one person be designated as a trustee to act for the whole body.

Another possible criticism is that feature which provides for the doctors promising to give testimony without charge. In every community, practically every community, there develops one or two persons who are reliable expert witnesses. If it should develop in this case that there were two or three good witnesses it would be in the interests of the company to call on these three or four who are the extra good witnesses and as they would not be remunerated it would be working a hardship on these few. It is this very feature, the paying of expert fees of the company, which they suggest, which makes it possible for the reduction in fee they have offered.

If less than 200 take advantage of it, it is only five dollars less than the usual rate, or if as many as 200 take advantage of it, it is only \$7.50 less than could be had with other companies. We are not going into detail about the reading of the available policy. Now if we accept this as a group we must get together and get a number of men who are interested in this policy so it will all end at the same time. I do not presume that any of the persons in the association have policies which expire on the same date. We suggest a remedy that would be this; letting a policy be written and read, "pay for pro rata from the time the policy expires until the other begins." If I have a policy which expires March 1st, I would only pay my share for the three months. Get the idea? So as to make my insurance come out next June when the old policy would expire.

Now with these few suggestions we wish to recommend, Mr. Chairman, that the matter be put in the hands of the Insurance Company, or their representative, for further information to the members of the association, and to see if they can secure 200 men at least who are willing to go into this, accepting the conditions, and if 200 can be secured to go into it we think it would be to their advantage to do so.

Dr. Heitzman: May I offer one suggestion here? It seems there is one point the committee has not said anything about. It seems we are banded together at least for protection and safety; would it not be wise for this association as a whole to take this company's policy and another policy and take it to an attorney and let him give us an opinion as to what is the best protection. Now such things have happened that we have taken insurance out with a company for protection and when the time came for protection we had no protection. I think it would be a matter that would be appreciated by every member of the association to know what policy he was taking out; what it covered. We want to know what an insurance policy covers, the amount of the policy, etc. I think if it meets with the approval of the Association, that this should be done.

Dr. Thompson: My understanding is that this proposition is to be placed before each member; a copy of the policy with the added warranties attached.

Dr. Clark: The Company presents a standard policy that is written by every company. There are only two points of difference between the companies that are writing and that is defense and liability. This covers both, and I think for the highest amount I know of. We went over this, four of us, carefully for an hour and a half. We tried to investigate everything the company has to offer;

and after going over it very carefully, and over all the changes suggested and made here, all of which Dr. Reed has mentioned, we have gone over all those, and tried to get the thing on such a basis as would make it a protection to every member without any inconvenience. It calls for a committee of five. We have asked the representative if it would be objectionable to them to appoint the three members who would be members of the group. They might have a case in one part of the country one week and somewhere else, and we asked the Company's representative if the insured could appoint one and the Company one. They said it would be satisfactory. In order to get at this, Mr. Chairman, in a definite way, this is the report of the committee.

That there be appointed a Trustee to represent the Association and arrange the details with the Insurance company and that after such details are arranged, the matter be submitted to the membership. The report was adopted.

Dr. Reed: We took the standard policy, which I think some members in this house hold, and are using; we took that policy and took the proposition up and compared carefully wherein they were making changes. Of course we are not attorneys. We have no authority to spend money to get an attorney's opinion, but the changes are so plain to my mind that there is nothing very bad about it. That is my private opinion of the matter. I think it would be all right before the proposition is closed, if this is accepted, that a trustee be appointed to put the matter before an attorney.

Dr. Thompson: I have had an attorney scrutinize it very thoroughly in the past, and as far as my information goes it is as good as any standard policy.

Dr. Boyle: I express my ignorance on these matters. There are some forty odd physicians in our county, and I think about 16 of them have paid their annual dues to the A. M. A. and to the county and state societies, and they do not understand this matter. They want to know if every member of this society who pays his one dollar extra, whether he gets anything from the company for that one dollar.

President: It has been moved and carried that it be accepted. I will appoint Dr. Horace Reed to look after the matter.

Committee report on Control and Study of Cancer, passed.

Committee report on pellagra (this report was embodied in the transactions of the section on general medicine and will be published later).

Committee report on study of Venereal Diseases, passed.

Committee report on Tuberculosis, read by Dr. L. J. Moorman, appears in preceding pages. Dr. Moorman stated that a paper had been read in the section on general medicine by a layman, Mr. E. K. Gaylord, in this connection, and that Mr. Gaylord offered to co-operate through the *Oklahoman* and by space for publicity in other papers, to place the study of prevention of tuberculosis before the people and moved that this or another committee be instructed to co-operate with Mr. Gaylord in the work. Motion adopted.

The Amendment to the By-Laws providing for appointment of committees substituting Chapter 8 was adopted as offered.

The Amendment to Chapter 9, Section 14, By-Laws, was adopted as offered.

The auditing committee reported that the books of the Secretary had been examined and found correct. All reports were adopted.

Dr. C. S. Bobo moved that the section on obstetrics be moved from the general medicine section and added to the section on pediatrics; carried.

A section on genito-urinary, skin and radiography was created with Dr. C. R. Day, Oklahoma City, as Chairman for organization.

Dr. D. A. Myers made a statement to the House requesting co-operation to make the Lawton-Medicine Park meeting in 1917 the most successful yet held.

Report of Resolutions committee read and adopted, see report preceding. Adjourned.

Proceedings of the Council.

May 9th, Noon.

Council called to order by the President, Dr. J. Hutchings White. Present, Drs. Cherry, Nesbit, Cronk, Williams, White, Thompson, Slover and Willour.

An auditing committee composed of Drs. Nesbit, Williams and Cherry was appointed.

Correspondence and papers relative to alleged malpractice defense was submitted to the Committee on Medical Defense, by the Secretary.

Moved and carried that certain expenses incident to telephone and telegraph expense to be incurred on account of the Wine of Cardui suits be paid.

The matter of selecting an attorney to represent the Association members who might have alleged malpractice suits to answer was discussed and the Committee on Medical Defense authorized to act.

It was recommended that the time limit for county society reports be made to read February 1st instead of May 1st, in order to comply with the features of medical defense which makes February 1st the last date until the society is to be placed on the delinquent list.

In the matter of an appeal from the action of Kiowa County Medical Society in expelling him from membership, Dr. L. H. Huffman, Hobart, appealed to the Council, and a committee composed of Drs. Cherry, Maupin and Slover was appointed to investigate and report. Adjourned.

May 10th

Call to order by the President.

The Council recommended that there be organized a section on genito-urinary, skin and radiology and that Dr. C. R. Day, Oklahoma City, be designated as Chairman for organization purposes.

The auditing committee reported the books of the Secretary-Treasurer to be correct.

On account of the increased work incident to a larger Journal and growing advertising business the salary of the Editor was increased by the addition of twenty-five dollars per month.

A majority and minority report in the matter of the appeal of Dr. L. H. Huffman was made and before final action was taken it was decided to hear in person Dr. L. H. Huffman and Drs. A. L. Wagoner, Secretary, J. R. Dale, member of the Board of Censors, G. W. Stewart and J. M. Bonham. After going into the case thoroughly it was the decision of the Council that: "The action of the Kiowa County Medical Society is sustained, with the provision that we direct that if Dr. L. H. Huffman wishes a new trial, that the society grant him such trial and that the Councilor of the District be notified of the date."

Bills for Councilor expense were ordered paid.

C. A. THOMPSON, Secretary.



JOURNAL OF THE OKLAHOMA STATE MEDICAL ASSOCIATION

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DR. CLAUDE A. THOMPSON, EDITOR-IN-CHIEF

ENTERED AT THE POSTOFFICE AT MUSKOGEE, OKLAHOMA AS SECOND CLASS MAIL MATTER, JULY 28, 1912

THIS IS THE OFFICIAL JOURNAL OF THE OKLAHOMA STATE MEDICAL ASSOCIATION. ALL COMMUNICATIONS SHOULD BE ADDRESSED TO THE JOURNAL OF THE OKLAHOMA STATE MEDICAL ASSOCIATION, BARNES BUILDING, MUSKOGEE, OKLAHOMA.

The editorial department is not responsible for the opinions expressed in the original articles of contributors.

Reprints of original articles will be supplied at actual cost, provided request for them is attached to manuscript or made in sufficient time before publication.

Articles sent this Journal for publication and all those read at the annual meetings of the State Association are the sole property of this Journal. The Journal relies on each individual contributor's strict adherence to this well-known rule of medical journalism. In the event an article sent this Journal for publication is published before appearance in the Journal, the manuscript will be returned to the writer.

Failure to receive the Journal should call for immediate notification of the editor, 507 Barnes Building, Muskogee, Okla.

Local news of possible interest to the medical profession, notes on removals, changes in address, deaths and weddings will be gratefully received.

Advertising of articles, drugs or compounds not approved by the Council on Pharmacy of the A. M. A. will not be accepted.

Advertising rates will be supplied on application. It is suggested that wherever possible members of the State Association should patronize our advertisers in preference to others as a matter of fair reciprocity.

EDITORIAL**THE OKLAHOMA CITY MEETING**

The best meeting ever held by the State Medical Association seems to be the verdict of practically every one attending this meeting. Nearly four hundred physicians registered. The elements making for success of the affair may be divided into three sections, clinical, section work and entertainment. The clinics were crowded all day and the physicians had the opportunity of observing the work of men who were equal in skill and judgment to those found in any clinics anywhere in this country—on this score the universal opinion was one of agreeable pride in the achievements of our fellow laborers in the Capitol. The Section work started off without unnecessary delay. Eye, Ear, Nose and Throat and Pediatrics completing their work the first day, Surgery, Gynecology and Obstetrics and General Medicine, on account of length requiring to go to the third day. The entertainment features followed the plan determined on some time ago, a banquet or smoker and then entertainment at Liberty Theatre. Owing to illness it was learned at the last moment that Dr. Harvey K. Gaylord who was one of the invited guests of the meeting would be unable to arrive and deliver his address on Cancer. The hospitals of the city served lunch to the visiting physicians who were attending the clinics, thus saving the time that would have otherwise been used in going to and from the hotels.

It is doubtful if a meeting of such proportions will be duplicated in Oklahoma in many a day.

THE LEGISLATIVE COMMITTEE REPORT

Elsewhere in these columns will be found the report of the Legislative Committee which is of most pressing importance at this time to the medical profession of Oklahoma, but certainly vastly of more importance to the people they protect or are attempting to protect from the wiles and humbuggery of the charlatan and fatal interference or non-interference of the ignorant. It is especially requested that every physician of our Association read the Committee report, ponder it well and *now* use his influence to help send to the legislature, honorable and intelligent men who will see to it that the people they represent are not inflicted with Voodooism, Charlatanry and the ignorant "piffle" of some of the alleged sciences now seeking recognition at the hands of our law makers.

PERSONAL AND GENERAL NEWS

Dr. C. L. Orr has moved from Roff to Ada.

Dr. C. M. Ming, Okmulgee, is doing special work in Chicago.

Dr. J. D. Bewley has moved from Locust Grove to Commerce.

Dr. J. L. Day, Norman, attended the New Orleans meeting in April.

Dr. and Mrs. O. E. Templin, Alva, announce the birth of a son April 17th.

Dr. Raymond H. Fox, Altus, recently visited the Kansas City clinics and hospitals.

Dr. McLain Rogers and Mrs. Rogers, Clinton, are visiting the Rochester Clinics.

Dr. J. Clay Williams and Miss Catherine Corum, Stroud, were married in Kansas City April 27.

Dr. W. R. Leverton, Cloud Chief, county health officer, spent April and May in the University of Kansas and Rochester, Minn.

Dr. J. M. Cooper, Enid, is doing special work in the Postgraduate and Polyclinic, New York. He will be in that city all summer.

Dr. J. L. Hillis, Pryor, narrowly escaped death in a branch of Pryor Creek recently, when he drove into the swollen stream. His horse was drowned.

Drs. John Reynolds and J. G. Rafter, Muskogee, have been appointed city health officer and city physician, respectively; vice Drs. C. T. Rogers and Fred. J. Wilkiemyer.

Fred R. Worden, McAlester, who had a nostrum for sale guaranteed to cure all ills, but which was unfortunately controlled by the U. S. Government, so those needing it "Must hurry," will now have to face trial in a Federal Court for impersonating an officer. He was indicted at Tulsa.

Dr. Carl Feige, an Oklahoma City "drugless practitioner," has been arrested in Hot Springs and released on \$10,000.00 bond to answer the charge of having caused the death of J. R. Stratton, Petersboro, Ontario. It is said Stratton starved to death; that he had been permitted nothing but water for a long time prior to death.

Dr. J. S. Fulton, Atoka, Chairman of the Medical Section, did not complete his Oklahoma City assignment. On the contrary he hurriedly deserted his job in order to recover a stolen automobile taken during his absence from home. He recovered both car and thief in Ardmore, the car a little worse for wear. The thief is in jail in Atoka, leaving the Medical Section the only loser.

"**Dr. Gorby**," the Oklahoma City chiropractor, has been on the grill in that city for some time answering a suit brought by Mrs. Minnie G. Burrus, who alleges he mistreated her husband until it was too late to save his life by an operation for appendicitis. The jury in the case finally stood irrevocably six to six and was discharged by Judge Oldfield, which result will necessitate a new trial. The case attracted wide attention over the state.

Judge Oldfield, in the Oklahoma County court, recently ruled in the "Dr. Gorby" case that a chiropractic physician impliedly assumed the same status as a physician; that the burden of proof was on the defendant to show that he possessed the same skill as a physician or doctor and consequently would be as liable for malpractice as any physician or surgeon properly recognized and legalized by the state. The Chiropractics' contention was that Gorby was only liable as a chiropractic and that he was not to be judged from the physicians' standpoint. To this the Judge ruled Gorby must show that he had average skill to treat a patient with appendicitis. The dead man's wife testified in court that Gorby gave her husband turpentine and salts and rubbed him, and that Gorby said "operations were expensive and unnecessary."

CORRESPONDENCE AND MISCELLANEOUS

DEPARTMENT OF PUBLIC HEALTH

Guthrie, May 9, 1916.

Dr. C. A. Thompson, Muskogee, Okla.

Dear Dr. Thompson: I am herewith enclosing to you a letter from the Surgeon General of the U. S. Public Health Service, regarding pemphigus, and a carbon copy of my reply thereto. By giving this matter publicity in the Journal, and requesting all physicians who have cases of this disease in their practice to report to me, I shall be glad indeed to transmit their report to the Surgeon General.

Yours very truly,

JOHN W. DUKE.

Commissioner of Health.

May 9, 1916.

Surgeon General Rupert Blue,

U. S. Public Health Service, Washington, D. C.

Dear Doctor: In reply to your favor of the 1st inst. regarding pemphigus in the United States,

I regret very much to be obliged to inform you that no statistics have been kept on this disease in this state. I shall take this matter up with the physician in this state at the State meeting of the Association on the 9th, 10th and 11th of this month. Furthermore, I shall give publicity to your inquiry in the State Medical Journal, and endeavor to collect such statistics as we can from the profession.

Yours very truly,

JOHN W. DUKE,

Commissioner of Health.

BUREAU OF THE PUBLIC HEALTH SERVICE

Washington, May 1, 1916.

To the Health Officer:

Sir: It is desired to collect as much data as possible regarding the occurrence of pemphigus in the United States during recent years, and particularly during the past year. Will you, therefore, fill out one of the inclosed cards for each case which is known to have occurred in your city. There is inclosed an addressed, franked envelope in which the cards may be returned.

It is suggested that in addition to furnishing data of cases which have come to the knowledge of the health department, information be obtained from hospitals and other sources that would be likely to know of cases of pemphigus.

As will be observed, it is desired to ascertain definitely among other things whether there is any relationship between this disease and vaccination.

The compiled data derived from the reports made by municipal health departments in response to this questionnaire will be published in the public health reports for the information of all. Additional case report cards will be furnished upon request.

Respectfully,

RUPERT BLUE, Surgeon General.

OFFICIAL CALL

To the Officers, Fellows and Members of the American Medical Association: The sixty-seventh annual session of the American Medical Association will be held at Detroit, Michigan, from Monday, June twelfth, to Friday, June sixteenth, nineteen hundred and sixteen.

The House of Delegates will convene Monday, June twelfth.

The Scientific Assembly will hold its first meetings on Tuesday, June thirteenth.

ALBERT VANDER VEER, President

ALEXANDER R. CRAIG, Secretary

HEALTH NEWS ISSUED BY THE UNITED STATES PUBLIC HEALTH SERVICE

DO YOU KNOW THAT

Today is always the best day to clean up?

Fresh air, food, rest—these three combat tuberculosis?

The U. S. Public Health Service has reduced typhoid fever 80 per cent. in some communities?

Overeating, constipation, lack of exercise, foul air, eye strain, may produce headache?

Polluted drinking water causes many deaths?

An efficient health officer is a good community investment?

Bad teeth handicap children?

Insufficient sleep endangers health?

BAN OFF ON SALVARSAN AND NEOSALVARSAN

FARBWERKE-HOECHST COMPANY

111-113 Hudson Street, New York

May 17th, 1916.

Dear Doctor: We beg to inform you that thanks to the good efforts of the State Department, the Allied Governments have consented to unmolested passage of a quantity of Salvarsan, Neosalvarsan and Novocain, and that the German Authorities, despite the abnormal conditions, have now permitted the exportation of these products to the United States. The first shipment of Salvarsan and Neosalvarsan is on the way to this port on the S. S. Nieuw Amsterdam, which is expected to reach here the early part of the week beginning May 22nd.

The only condition imposed upon us by the German Government is that strict guarantees have to be given on the part of this Company that the shipments allowed to come from Germany are for

use in this country only, and under these circumstances there is nothing for us to do but to continue our method of direct distribution as practiced since the outbreak of the war.

Notwithstanding advanced cost to us, due to very materially increased cost of importation, we shall maintain the schedule which has been in existence since April 1st, 1915, namely \$4.50 per ampule for Salvarsan 0.6 gram and Neosalvarsan No. VI, 0.9 gram.

The first consignment now on the way consists of Salvarsan 0.6 gram and the corresponding size of Neosalvarsan dosage VI, containing 0.9 gram.

The orders on file for these sizes will be filled in turn pro rata and forwarded with the utmost speed by parcel post collect, unless we are advised to the contrary by return mail.

If you have not as yet placed your order with us for your current requirements, please do so at your earliest opportunity.

Spurious and fraudulent substitutes for Salvarsan and Neosalvarsan have appeared in the market, many of which are dangerous to life, and all of which infringe the Ehrlich patents, and we desire to impress upon you that we are the sole authorized importers of Salvarsan and Neosalvarsan and that the genuine products can only be procured through us.

Very truly yours,

FARBWERKE-HOECHST COMPANY,

H. A. METZ, President,

Pharmaceutical Department.

Muskogee, Oklahoma, May 15, 1916.

Mr. Hubert L. Bolen, Collector,
Oklahoma City, Oklahoma.

Dear Sir: Please advise me if on making application for re-registration at the beginning of the new year (June 30) under the provisions of the Harrison's Anti-Narcotic Law, it is necessary for a physician to make an inventory or other statement to your office.

I will thank you for an immediate reply to this as I want it for publication in our Journal.

Yours very truly,

C. A. THOMPSON, Secretary-Editor

INTERNAL REVENUE SERVICE

Oklahoma City, Okla., May 16, 1916.

Dr. C. A. Thompson,
Muskogee, Oklahoma.

Sir: I am enclosing herewith copy of Treasury Decision 2327 regarding the sending to this office of narcotic invoices at time of re-registration.

We cannot accept narcotic tax nor issue tax stamp to applicants unless application is accompanied by duplicate narcotic invoice of narcotics on hand at time of application.

Respectfully,

HUBERT L. BOLEN, Collector.

T. D. 2327—NARCOTIC LAW

Annual inventory, in duplicate, of narcotic drugs required of persons applying for registration under the provisions of the Act of December 17, 1914.

TREASURY DEPARTMENT OFFICE OF COMMISSIONER OF INTERNAL REVENUE, Washington, D. C., May 2, 1916.

Every person, firm, or corporation making application for registration under the provisions of the Act of December 17th, 1914, must at the time of applying for such registration prepare, in duplicate, an inventory of all narcotic drugs and preparations (other than those specifically exempt under the provision of section 6 as defined in Treasury Decision 2309) on hand at the date of application for registration. Where, however, a registered person at some fixed date annually takes a stock inventory, either at the close of the business fiscal year or of the calendar year, such inventory, in duplicate, showing the quantity and names of narcotic drugs and preparations on hand on the date next preceding the date of application for registration may be filed in lieu of the annual inventory required at the date of registration.

The original inventory must be kept on file by the maker with previous inventories, and the duplicate forwarded to the collector of internal revenue. No special form of inventory is required, but it must clearly set forth the name and quantity of each kind of narcotic drug, preparation or remedy, and be verified by oath or affirmation executed in conformity with law. Collectors will refuse a registration number and special tax stamp to an applicant who fails to furnish annually at or before the date of registration a duplicate of such inventory.

W. H. OBSORN,

Commissioner of Internal Revenue

APPROVED:

BYRON R. NEWTON,

Acting Secretary of the Treasury.

PROPAGANDA AND REFORM

Diarsenol—Dr. E. H. Martin, Hot Springs, Ark., reports that, after giving several hundred doses of Diarsenol without any bad effects whatever, he had two cases in which nausea, vomiting and symptoms of apparent collapse such as have been previously reported by another writer. He found on investigation that the specimens which in his hands gave untoward results as well as those previously reported on and two further accidents were all due to a product bearing the same lot number. (Jour. A. M. A., April 8, 1916, p. 1155).

Prescribing of Narcotics—The Harrison Antinarcotic law exempts from its operations ready-made mixtures containing specified small quantities of narcotics, but requires physicians' prescriptions containing small amounts of narcotics to be registered. The law should be made consistent by requiring the registration of all prescriptions containing narcotics in any amount. The inconsistency in the law should be removed by prohibiting absolutely the sale, except on a physician's prescription, of preparations containing narcotics in any proportion. The continued uses of small doses of a narcotic drug is just as capable of establishing the habit as is the use of larger doses. (Jour. A. M. A., April 8, 1916, p. 1156).

A Much Needed Pharmacologic Investigation—J. D. Pilcher, University of Nebraska College of Medicine, has investigated the action on the uterus of the guinea pig of a number of drugs which are widely used as ingredients of proprietary "female remedies," and which so far have been little, or not at all, studied. *Bluc cohosh* (*Caulophyllum thalictroides*) showed a variable tonic effect. *Pulsatilla* (*Ancimone pulsatilla* or *Pulsatilla pratensis*), unicorn root (*Aletris farinosa*), figwort (*Scrophularia marylandica*), valerian (*Valeriana officinalis*) and skullcap (*Scutellaria lateriflora*) were more or less depressant. The following drugs gave negative results: cramp bark (*Viburnum opulus*), black haw (*Viburnum prunifolium*), swamp maple (*Acer spicatum*), false unicorn (*Chamaelirium luteum* or *Helonias dioica*), liferoot (*Senecio aureus*), wild yam (*Dioscorea villosa*), motherwort (*Leonurus cardiaca*), passion flower (*Passiflora incarnata*) and squaw vine (*Mitchella repens*). It is to be hoped that Pilcher's work will permit the formation of an opinion as to the therapeutic value of those drugs in which some degree of activity has been found. (Jour. A. M. A., April 15, 1916, p. 1205).

Why Glycerophosphates?—The glycerophosphates are split up in the intestines into ordinary phosphates and absorbed and utilized, if they are utilized at all. There is no evidence that glycerophosphates have any pharmacologic action to warrant the belief that they are of use as therapeutic agents. The belief in their value is kept alive by the promotion of certain proprietary mixtures. The glycerophosphates will be continued to be manufactured until physicians refuse to prescribe them. A manufacturer has even substituted glycerophosphates for the potent yellow phosphorus in his elixir of phosphorus, *nux vomica* and *damiana* and, so his chemist reports, physicians continue to prescribe the proprietary, the composition of which has been altered. (Jour. A. M. A., April 15, 1916, p. 1205).

Emetin Hydrochlorid Variable—It should not be taken for granted that because a drug bears the name of a definite compound it is true to name and pure, and therefore trustworthy in its action. This fact has recently been demonstrated in regard to emetin hydrochlorid. Two cases in which the administration of emetin hydrochlorid produced symptoms of poisoning (one terminating fatally) at the Johns Hopkins Medical Clinic led to an investigation by R. L. Levy and L. G. Rowntree, in which the emetin hydrochlorid preparations of five pharmaceutical houses were used. This investigation led to the conclusion that the products supplied as emetin hydrochlorid are variable in composition and in toxicity to a degree which constitutes a serious danger. It behooves physicians to insist on some declaration from the firm supplying emetin hydrochlorid as to its purity and as to the standard employed. Levy and Rowntree emphasize also the fact that emetin hydrochlorid medication itself is not an innocuous procedure. To avoid the toxic effects of emetin, the dosage should be carefully adjusted for each individual and the treatment should be given in courses at intervals of several days or a week. The subcutaneous method of administration is to be preferred. (The Archives of Internal Medicine, March 15, 1916, p. 420).

Cactus Compound Pills.—A pharmaceutical firm makes Pills Cactus Compound (Heart Tonic) each of which is said to contain: "Cactus grandiflorus 1-2 gr., Sparteine sulphate 1-40 gr., Digitalin, pure (German) 1-125 gr., Strychnine sulphate 1-500 gr., Glonoin (nitroglycerin) 1-500 gr., Strophanthin 1-5000 gr." The combination is irrational and the dosage of the individual drugs, in most instances, absurdly small. Every one of the ingredients except digitalin may be disregarded either because of inertness or because of the small amount present, and the treatment then becomes one of digitalis. The selling name of "Cactus Compound" is a misnomer as the activity of the pill is that of the small dose of the digitalis glucoside. The pill is an illustration of how worthless drugs are perpetuated. At one time it was thought that cactus had therapeutic value. During that time many "specialties" and proprietaries bearing its name were put on the market. Although the drug is now known to be worthless, these specialties continue to be sold (Jour. A. M. A., April 29, 1916, p. 1387).

ROSTER OF MEMBERS OF COUNTY SOCIETIES, OKLAHOMA STATE MEDICAL ASSOCIATION, 1916.

ADAIR COUNTY

Dr. D. P. Chambers	Stilwell	Dr. I. W. Rogers	Watts
Dr. B. F. Collins	Stilwell	Dr. A. J. Sands	Watts
Dr. Jas. A. Patton	Stilwell	Dr. C. A. Walters	Stilwell
Dr. C. M. Robinson	Stilwell	Dr. T. S. Williams	Stilwell
Dr. Jas. A. Robinson	Dutch Mills, Ark.		

ALFALFA COUNTY

Dr. H. B. Ames	Burlington	Dr. E. C. Ludlum	Carmen
Dr. Z. J. Clark	Cherokee	Dr. T. T. Matlock	Carmen
Dr. S. B. Growden	Cherokee	Dr. B. A. Moore	Lambert
Dr. J. S. Hibbard	Cherokee	Dr. E. J. Reichley	Helena
Dr. E. L. Jones	Ingersoll	Dr. T. A. Rhodes	Goltry
Dr. W. G. Kiebler	Goltry	Dr. C. M. Smith	Cherokee
Dr. L. T. Lancaster	Cherokee	Dr. J. M. Tucker	Carmen
Dr. H. A. Lile	Aline		

ATOKA COUNTY

Dr. T. H. Briggs	Atoka	Dr. M. Pinson	Atoka
Dr. C. H. Fields	Caney	Dr. J. W. Rollins	Atoka
Dr. J. S. Fulton	Atoka	Dr. C. C. Rose	Springtown
Dr. C. C. Gardner	Atoka	Dr. E. A. Rowley	Atoka

BEAVER COUNTY

Dr. May Drew Twyford	Beaver
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BECKHAM COUNTY

Dr. J. M. Deuby	Carter	Dr. Thos. D. Palmer	Elk City
Dr. G. L. Harker	Elk City	Dr. M. Shadid	Carter
Dr. A. L. Hatcher	Texola	Dr. H. K. Speed	Sayre
Dr. A. A. Huntley	Sweetwater	Dr. J. E. Standifer	Elk City
Dr. J. Paul Jones	Carter	Dr. Dewitt Stone	Sayre
Dr. I. A. Lee	Erick	Dr. C. W. Tedrowe	Elk City
Dr. H. M. Levi	Beaver	Dr. V. C. Tisdal	Elk City
Dr. J. M. McComas	Elk City	Dr. J. D. Warford	Erick
Dr. R. C. McCreery	Erick	Dr. O. N. Windle	Sayre
Dr. W. W. McDonald	Sayre	Dr. J. E. Yarbrough	Erick
Dr. Nelson O. Benson	Delhi		

BLAINE COUNTY

Dr. J. S. Barnett	Hitchcock	Dr. W. R. Kelly	Watonga
Dr. Henry Blender	Okeene	Dr. J. B. Leisure	Watonga
Dr. J. M. Browning	Geary	Dr. E. F. Milligan	Geary
Dr. F. R. Buchanan	Canton	Dr. L. H. Murdoch	Okeene
Dr. M. W. Buchanan	Watonga	Dr. J. A. Norris	Okeene
Dr. H. W. Doty	Homestead	Dr. A. F. Padberg	Canton
Dr. C. A. Freeman	Geary	Dr. D. F. Stough	Geary
Dr. G. T. Green	Drumright	Dr. S. G. Wishard	Watonga

BRYAN COUNTY

Dr. J. R. Allen	Caddo	Dr. C. S. Mullenix	Roberta
Dr. D. Armstrong	Mead	Dr. H. E. Rappolee	Caddo
Dr. J. L. Austin	Durant	Dr. J. L. Reynolds	Durant
Dr. P. L. Cain	Albany	Dr. E. W. Richardson	Colbert
Dr. R. P. Dickey	Kennebec	Dr. T. M. Rushing	Durant
Dr. H. B. Fuston	Bokchito	Dr. J. L. Shuler	Durant
Dr. R. H. Grassham	Caddo	Dr. J. B. Smith	Durant
Dr. J. R. Keller	Calera	Dr. W. A. Thompson	Kusa
Dr. D. C. McCalib	Utica	Dr. A. J. Wells	Calera
Dr. W. H. McCarley	Colbert	Dr. C. C. Yeiser	Clobert

CADDO COUNTY

Dr. P. H. Anderson	Anadarko	Dr. Geo. R. Campbell	Anadarko
Dr. J. H. Beuder	Apache	Dr. Claude S. Chambers	Anadarko
Dr. Jesse Bird	Cement	Dr. Walter T. Dardis	Fort Cobb
Dr. S. Blair	Apache	Dr. F. Dinkler	Fort Cobb
Dr. W. E. Booth	Sickles	Dr. Edw. W. Downs	Hinton
Dr. B. D. Brown	Apache	Dr. M. H. Edens	Verden

CADDO COUNTY (Continued)

Dr. O. F. Harper	Oklahoma City	Dr. W. B. Putnam	Alfalfa
Dr. W. T. Hawn	Binger	Dr. R. D. Rector	Anadarko
Dr. J. J. Henke	Hydro	Dr. F. W. Rogers	Carnegie
Dr. Chas. R. Hume	Anadarko	Dr. P. L. Sanders	Carnegie
Dr. R. E. Johnston	Bridgeport	Dr. R. Earle Smith	Gracemont
Dr. W. W. Kerley	Anadarko	Dr. A. H. Taylor	Anadarko
Dr. C. W. Lane	Omak, Washington	Dr. Wade H. Vann	Cement
Dr. P. L. McClure	Ft. Cobb	Dr. D. D. Weiser	Apache
Dr. O. D. McCray	Binger	Dr. A. J. Willard	Cyril
Dr. Geo. M. McVey	Cyril	Dr. R. W. Williams	Anadarko
Dr. J. W. Padberg	Carnegie	Dr. S. E. Williams	Hydro
Dr. C. E. Putnam	Eakley		

CANADIAN COUNTY

Dr. T. M. Aderhold	El Reno	Dr. W. R. Miller	Calumet
Dr. C. D. Arnold	El Reno	Dr. W. J. Muzzy	El Reno
Dr. H. C. Brown	Okarche	Dr. D. P. Richardson	Union City
Dr. W. B. Catto	El Reno	Dr. J. I. Riley	El Reno
Dr. F. H. Clark	El Reno	Dr. N. E. Ruhl	Piedmont
Dr. J. A. Hatchett	El Reno	Dr. R. E. Runkle	El Reno
Dr. P. F. Herod	El Reno	Dr. S. S. Sanger	Yukon
Dr. R. F. Koons	El Reno	Dr. G. W. Taylor	El Reno
Dr. Thos. Lane	El Reno	Dr. L. J. Wolf	Okarche
Dr. L. W. Lynde	Okarche		

CARTER COUNTY

Dr. G. W. Amerson	Milo	Dr. G. E. Goodwin	Ardmore
Dr. A. E. Ballard	Madill	Dr. Walter Hardy	Ardmore
Dr. J. T. Barnwell	Graham	Dr. W. G. Hathaway	Poolville
Dr. J. C. Best	Ardmore	Dr. Robert H. Henry	Ardmore
Dr. F. W. Boadway	Ardmore	Dr. J. C. McNees	Ardmore
Dr. T. S. Booth	Ardmore	Dr. J. H. Smith	Healdton
Dr. J. L. Cox	Ardmore	Dr. Dow Taylor	Woodford
Dr. T. W. Dowdy	New Wilson	Dr. F. P. VonKellar	Ardmore
Dr. D. H. Gillespie	Springer	Dr. R. S. Willard	Brock

CHEROKEE COUNTY

Dr. G. P. Allison	Tahlequah	Dr. Isreal Hill	Tahlequah
Dr. J. S. Allison	Tahlequah	Dr. J. J. Johnson	Moodys
Dr. A. A. Baird	Park Hill	Dr. R. L. Manning	Cookson
Dr. W. G. Blake	Tahlequah	Dr. L. E. McCurry	Tahlequah
Dr. T. J. Bond	Hulbert	Dr. B. L. Morrow	Peggs
Dr. W. L. Brown	Hulbert	Dr. C. A. Peterson	Tahlequah
Dr. J. T. Duckworth	Tahlequah	Dr. Joseph M. Thompson	Tahlequah

CHOCTAW COUNTY

Dr. E. R. Askew	Hugo	Dr. T. A. Hartgraves	Soper
Dr. M. L. Carter	Hugo	Dr. W. N. John	Hugo
Dr. T. L. Chambliss	Soper	Dr. Geo. I. Marsh	Ft. Towson
Dr. George M. Davis	Bixby	Dr. V. L. McPherson	Boswell
Dr. Robert L. Gee	Hugo	Dr. J. D. Moore	Sawyer
Dr. C. H. Hale	Boswell	Dr. C. H. Swearingin	Hugo
Dr. G. E. Harris	Hugo	Dr. H. H. White	Hugo
Dr. J. O. Hartgraves	Soper		

CLEVELAND COUNTY

Dr. C. S. Bobo	Norman	Dr. J. B. Lambert	Lexington
Dr. G. M. Clifton	Norman	Dr. R. D. Lowther	Norman
Dr. J. A. Davis	Norman	Dr. W. J. Melton	Norman
Dr. J. L. Day	Norman	Dr. C. E. Northcutt	Lexington
Dr. Gayfree Ellison	Norman	Dr. R. E. Thacker	Lexington
Dr. J. J. Gable	Norman	Dr. J. P. Torry	Norman
Dr. S. H. Graham	Norman	Dr. J. M. Williams	Norman
Dr. D. W. Griffin	Norman	Dr. Asa Wright	Norman
Dr. A. C. Hirshfield	Oklahoma City		

COAL COUNTY

Dr. Frank Bates	Coalgate	Dr. A. Cates	Tupelo
Dr. J. H. Blackburn	Tupelo	Dr. J. B. Clark	Coalgate
Dr. W. E. Brown	Leligh	Dr. R. D. Cody	Centrahoma

COAL COUNTY (Continued)

Dr. L. A. Conner	Coalgate	Dr. J. A. Nelson	Centrahoma
Dr. H. G. Goben	Lehigh	Dr. F. E. Rushing	Coalgate
Dr. J. J. Hipes	Philips	Dr. F. E. Sadler	Coalgate
Dr. W. A. Logan	Lehigh	Dr. W. B. Wallace	Coalgate

COMANCHE COUNTY

Dr. H. A. Angus	Lawton	Dr. J. C. Johnston	Lawton
Dr. C. W. Baird	Lawton	Dr. C. W. Joyce	Fletcher
Dr. T. S. Barber	Lawton	Dr. L. A. Knee	Lawton
Dr. Jackson Brashears	Lawton	Dr. J. W. Malcolm	Lawton
Dr. H. V. Dresback	Geronimo	Dr. W. B. Mead	Lawton
Dr. E. B. Dunlap	Lawton	*Dr. E. D. Meeker	Lawton
Dr. E. S. Gooch	Lawton	Dr. L. A. Milne	Lawton
Dr. L. T. Gooch	Lawton	Dr. E. B. Mitchell	Lawton
Dr. F. W. Hammond	Lawton	Dr. D. A. Myers	Lawton
Dr. J. R. Hood	Indianoma	Dr. J. A. Perisho	Cache
Dr. C. P. Hues	Lawton	Dr. G. Pinnell	Lawton
Dr. J. T. Janney	Lawton	Dr. F. Shoemaker	Salt Lake City, Utah

COTTON COUNTY

Dr. C. W. Alexander	Temple	Dr. Jas. D. Kernodle	Randalette
Dr. B. H. Burnett	Geronimo	Dr. Chas. McCallum	Randalette
Dr. M. T. Clark	Temple	Dr. Howard McKinney	Temple
Dr. C. F. House	Hastings	Dr. M. J. Sanders	Devol
Dr. M. A. Jones	Walters	Dr. G. O. Webb	Temple

CRAIG COUNTY

Dr. F. M. Adams	Vinita	Dr. W. W. Jackson	Vinita
Dr. Louis Bagby	Vinita	Dr. W. R. Marks	Vinita
Dr. C. P. Bell	Welch	Dr. R. L. Mitchell	Vinita
Dr. J. D. Bradshaw	Welch	Dr. C. S. Neer	Vinita
Dr. N. L. Cornwell	Durant	Dr. I. L. Robinson	Bluejacket
Dr. J. W. Craig	Vinita	Dr. F. C. Rose	Centralia
Dr. B. L. Elam	Centralia	Dr. J. L. Staples	Bluejacket
Dr. B. F. Fortner	Vinita	Dr. D. B. Stough	Vinita
Dr. P. L. Hayes	Vinita	Dr. J. A. Wharton	Ketchum
Dr. A. W. Herron	Vinita	Dr. Frank Woolard	Welch
Dr. F. L. Hughson	Vinita		

CREEK COUNTY

Dr. C. M. Ament	Sapulpa	Dr. M. Karaseck	Drumwright
Dr. Amos Avery	Sapulpa	Dr. T. F. Laidig	Drumwright
Dr. C. B. Blachly	Drumwright	Dr. W. P. Longmire	Sapulpa
Dr. J. W. Bone	Sapulpa	Dr. J. A. Martin	Shamrock
Dr. O. C. Coppedge	Bristow	Dr. J. M. Mattenlee	Sapulpa
Dr. O. S. Coppedge	Depew	Dr. C. F. McCallum	Sapulpa
Dr. G. C. Croston	Sapulpa	Dr. Ira I. Ramey	Drumwright
Dr. A. H. Crouch	Mounds	Dr. C. B. Reese	Sapulpa
Dr. Melvin Fry	Drumwright	Dr. E. W. Reynolds	Bristow
Dr. H. S. Garland	Sapulpa	Dr. B. C. Schwab	Sapulpa
Dr. I. E. Gladden	Kiefer	Dr. G. A. Stafford	Kiefer
Dr. C. A. Gooch	Markham	Dr. Chas T. Schrader	Bristow
Dr. Harry R. Haas	Sapulpa	Dr. R. M. Sweeney	Sapulpa
Dr. Ben C. Harris	Sapulpa	Dr. Z. G. Taylor	Mounds
Dr. J. W. Hoover	Sapulpa	Dr. J. M. Wells	Bristow
Dr. Ellis Jones	Keifer	Dr/ Geo. H. Wetzel	Sapulpa
Dr. H. B. Justice	Sapulpa	Dr. F. R. Wheeler	Manford

CUSTER COUNTY

Dr. T. J. Butler	Weatherford	Dr. C. H. McBurney	Clinton
Dr. M. C. Comer	Weatherford	Dr. A. H. Parker	Custer City
Dr. S. C. Davis	Weatherford	Dr. W. W. Parker	Thomas
Dr. T. E. Evans	Butler	Dr. L. L. Patterson	Arapaho
Dr. Harry R. Gordon	Weatherford	Dr. McLain Rogers	Clinton
Dr. K. D. Gossom	Custer City	Dr. W. B. Tilton	Clinton
Dr. Ellis Lamb	Clinton	Dr. N. P. H. White	Clinton
Dr. N. M. Marshall	Butler	Dr. J. J. Williams	Weatherford
Dr. P. G. Murray	Thomas		

*Deceased

DEWEY COUNTY

Dr. V. M. Gore	Taloga	Dr. W. E. Seba	Leedy
Dr. E. J. Hughes	Taloga	Dr. O. W. Wright	Putnam

GARFIELD COUNTY

Dr. J. H. Barnes	Enid	Dr. W. E. Lamerton	Enid
Dr. G. A. Boyle	Enid	Dr. S. A. Looper	Garber
Dr. L. W. Cotton	Enid	Dr. J. E. Mahoney	Enid
Dr. Frank P. Davis	Enid	Dr. S. N. Mayberry	Enid
Dr. J. W. Francisco	Enid	Dr. E. N. McKee	Enid
Dr. D. S. Harris	Drummond	Dr. W. B. Newell	Hunter
Dr. Jas. H. Hays	Enid	Dr. A. S. Piper	Enid
Dr. T. B. Hinson	Enid	Dr. C. E. Thompson	Enid
Dr. F. A. Hudson	Enid	Dr. A. E. Wilkins	Covington
Dr. M. A. Kelso	Enid	Dr. E. J. Wolff	Waukomis
Dr. W. L. Kendall	Enid		

GARVIN COUNTY

Dr. T. C. Branum	Pauls Valley	Dr. M. E. Robberson	Brady
Dr. J. R. Callaway	Pauls Valley	Dr. A. J. Robinson	Pauls Valley
Dr. John R. Callaway	Mescalero, New Mexico	Dr. W. E. Settles	Wynnewood
Dr. John Darst	Wynnewood	Dr. J. B. Shannon	Pauls Valley
Dr. Lewis Gaddy	Stratford	Dr. J. W. Shelton	Pauls Valley
Dr. W. C. High	Maysville	Dr. A. H. Shi	Stratford
Dr. G. L. Johnson	Pauls Valley	Dr. A. Struble	Pauls Valley
Dr. A. P. Keever	Lindsey	Dr. C. L. Sullivan	Elmore City
Dr. E. H. Lain	Paoli	Dr. Earnest Sullivan	Maysville
Dr. J. K. Lindsey	Elmore City	Dr. J. I. Taylor	Loco
Dr. N. H. Lindsey	Pauls Valley	Dr. J. W. Tucker	Purdy
Dr. J. C. Matheney	Lindsey	Dr. M. M. Webster	Stratford
Dr. Price Patterson	Maysville	Dr. H. P. Wilson	Wynnewood
Dr. C. M. Pratt	Maysville	Dr. S. W. Wilson	Lindsay

GRADY COUNTY

Dr. H. C. Antle	Chickasha	Dr. R. J. Gordon	Ninnekah
Dr. Wm. R. Barry	Bradley	Dr. J. P. Hampton	Rush Springs
Dr. R. J. Baze	Chickasha	Dr. A. E. Hennings	Tuttle
Dr. Martha J. Bledsoe	Chickasha	Dr. T. G. Hill	Naples
Dr. W. C. Boon	Chickasha	Dr. R. H. Hume	Mingo
Dr. W. H. Cook	Chickasha	Dr. F. W. Jones	Verden
Dr. C. P. Cox	Ninnekah	Dr. A. B. Leeds	Chickasha
Dr. E. L. Dawson	Chickasha	Dr. J. S. Little	Mingo
Dr. D. S. Downey	Chickasha	Dr. W. H. Livermore	Chickasha
Dr. L. E. Emanuel	Chickasha	Dr. S. O. Marrs	Chickasha
Dr. H. M. Evans	Rush Springs	Dr. C. G. Martin	Pocasset
Dr. J. W. Finley	Rush Springs	Dr. Walter Penquite	Chickasha
Dr. T. Fuller	Amber	Dr. A. C. White	Chickasha
Dr. G. R. Gerard	Ninnekah	Dr. L. H. Winborn	Tuttle

GRANT COUNTY

Dr. G. T. Drennan	Pond Creek	Dr. J. F. Martin	Deer Creek
Dr. J. V. Hardy	Medford	Dr. B. D. Roberts	Nashville
Dr. W. E. Harrington	Wakita	Dr. B. W. Saffold	Gibbon
Dr. S. A. Lively	Wakita	Dr. H. A. Stalker	Pond Creek
Dr. C. H. Lockwood	Medford	Dr. J. M. Watson	Tamont

GREER COUNTY

Dr. G. F. Border	Mangum	Dr. O. R. Jeter	Brinkman
Dr. B. F. Carr	Mangum	Dr. J. B. Lansden	Granite
Dr. G. P. Cherry	Mangum	Dr. Frank H. McGregor	Mangum
Dr. W. D. Dawson	Mangum	Dr. B. F. Moss	Willow
Dr. M. M. DeArmond	Mangum	Dr. Ney Neel	Mangum
Dr. T. J. Dodson	Mangum	Dr. Porter Norton	Mangum
Dr. W. O. Dosdon	Willow	Dr. T. J. Nunnery	Granite
Dr. H. W. Finley	Reed	Dr. L. E. Pearson	Reed
Dr. R. L. Holt	Mangum	Dr. E. M. Poer	Jester
Dr. Thos. J. Horsley	Mangum	Dr. G. W. Wiley	Granite

HARMON COUNTY

Dr. E. J. Kilpatrick	Vinson	Dr. W. C. Pendergraft	Hollis
Dr. E. E. Collins	Louis	Dr. J. B. Patrick	Vinson
Dr. S. W. Hopkins	Hollis	Dr. W. T. Ray	Gould
Dr. J. E. Jones	Hollis	Dr. J. W. Scarborough	Gould
Dr. H. Lindley	Hollis	Dr. O. J. Street	Gould
Dr. J. S. McFaddin	Hollis		

HASKELL COUNTY

Dr. A. C. Bullard	Quinton	Dr. W. J. Ramsay	McCurtain
Dr. A. M. Chambers	McCurtain	Dr. Harry Sims	Stigler
Dr. R. R. Culbertson	Hoyt	Dr. R. F. Terrell	Stigler
Dr. John Davis	Stigler	Dr. Ernest Thomas	Quinton
Dr. E. Johnson	Kinta	Dr. T. B. Turner	Stigler
Dr. W. C. Gilliam	Quinton	Dr. J. R. Waltrip	Kinta
Dr. B. T. McClure	McCurtain	Dr. M. Van Matre	Keota
Dr. S. E. Mitchell	Stigler		

HUGHES COUNTY

Dr. W. L. Dixon	Yeager	Dr. John W. Lowe	Holdenville
Dr. F. B. Hicks	Wetumka	Dr. P. E. Mitchell	Wetumka

JACKSON COUNTY

Dr. E. A. Abernathy	Altus	Dr. D. E. Wilson	Ehner
Dr. J. J. Caviness	Headrick	Dr. J. W. McCray	Martha
Dr. W. H. Clarkson	Blair	Dr. S. P. Rawls	Altus
Dr. E. S. Crowe	Olustee	Dr. W. H. Rutland	Altus
Dr. B. J. Davis	Sand Springs	Dr. W. E. Sanderson	Altus
Dr. Raymond H. Fox	Altus	Dr. C. G. Spears	Altus
Dr. D. L. Garrett	Altus	Dr. S. P. Strother	Altus
Dr. R. H. Hyde	Eldorado	Dr. Jno. S. Stults	Olustee
Dr. S. H. Landrum	Altus	Dr. H. R. Taylor	Eldorado
Dr. Jas. T. Lowe	Humphrey	Dr. R. Z. Taylor	Blair
Dr. R. H. Mays	Duke	Dr. D. C. Buck	Eldorado
Dr. E. P. Miles	Duke		

JEFFERSON COUNTY

Dr. T. E. Ashinhurst	Waurika	Dr. C. M. Maupin	Waurika
Dr. A. G. Cranfill	Grady	Dr. J. W. Moore	Waurika
Dr. J. O. Derr	Waurika	Dr. J. M. Stephens	Hastings
Dr. L. E. Gee	Terral	Dr. S. O. Taylor	Cornish
Dr. A. B. Halstead	Atlee	Dr. G. C. Wilton	Ryan
Dr. A. R. Lewis	Ryan		

JOHNSTON COUNTY

Dr. C. B. Ballard	Mannsville	Dr. C. A. Hicks	Bromide
Dr. Guy Clark	Milburn	Dr. H. B. Knisley	Tishomingo
Dr. W. P. Cottrell	Milburn	Dr. J. T. Looney	Tishomingo
Dr. W. R. Covey	Mannsville	Dr. G. Y. McKinney	Emet
Dr. S. E. Cummings	Ravia	Dr. F. W. Stallings	Tishomingo
Dr. J. M. Ellis	Wapanucka	Dr. F. B. Stobaugh	Mannsville
Dr. S. B. Enloe	Fillmore	Dr. F. A. White	Russet
Dr. V. R. Hamble	Coleman	Dr. W. W. Vannoy	Tishomingo

KAY COUNTY

Dr. W. K. Bell	Blackwell	Dr. G. H. Neimann	Ponca City
Dr. A. P. Gearhart	Blackwell	Dr. W. C. Northup	Braman
Dr. H. O. Gowey	Newkirk	Dr. E. J. Orvis	Blackwell
Dr. A. R. Havens	Nardina	Dr. Arthur S. Risser	Blackwell
Dr. J. A. Jones	Tonkawa	Dr. W. A. T. Robertson	Ponca City
Dr. W. M. Johnson	Peckham	Dr. H. M. Stricklen	Tonkawa
Dr. Allen Lowery	Blackwell	Dr. E. E. Waggoner	Tonkawa
Dr. D. W. Miller	Blackwell		

KINGFISHER COUNTY

Dr. E. R. Cavett	Kiel	Dr. John R. Pollock	Cashion
Dr. A. B. Cullum	Beloit, Kan.	Dr. Newton Rector	Hennessey
Dr. Chas. W. Fisk	Kingfisher	Dr. A. L. Share	Kingfisher
Dr. C. O. Gose	Hennessey	Dr. Clarence E. Wagner	Hennessey
Dr. J. A. Overstreet	Kingfisher		

KIOWA COUNTY

Dr. A. Barkley	Hobart	Dr. H. C. Lloyd	Hobart
Dr. J. M. Bonham	Hobart	Dr. F. F. Martin	Roosevelt
Dr. T. A. Boyd	Gotebo	Dr. J. A. Muller	Snyder
Dr. Calvin E. Bradley	Mountain View	Dr. William McIlwain	Lonewolf
Dr. J. R. Bryce	Snyder	Dr. C. R. Preston	Mountain Park
Dr. J. R. Dale	Hobart	Dr. J. M. Ritter	Cold Springs
Dr. D. M. Gray	Mountain View	Dr. Paul R. Seibert	Cooperton
Dr. Hubert V. Hailman	Gotebo	Dr. G. W. Stewart	Hobart
Dr. J. T. Hamilton	Snyder	Dr. A. L. Wagoner	Hobart
Dr. A. Hathaway	Mountain View	Dr. T. L. Willis	Lonewolf

LATIMER COUNTY

Dr. H. H. Dalbey	Wilburton	Dr. J. F. McArthur	Wilburton
Dr. Eugene L. Evins	Wilburton	Dr. J. A. Munn	Wilburton
Dr. E. B. Hamilton	Wilburton	Dr. R. L. Rich	Red Oak
Dr. T. L. Henry	Wilburton	Dr. I. C. Talley	Red Oak
Dr. Garnett A. Kilpatrick	Wilburton		

LEFLORE COUNTY

Dr. J. B. Beckett	Spiro	Dr. R. W. Minor	Williams
Dr. S. D. Bevell	Heavener	Dr. A. M. Mixon	Spiro
Dr. G. R. Booth	LeFlore	Dr. J. L. Plumlee	Poteau
Dr. E. L. Collings	Panama	Dr. M. Plumlee	Poteau
Dr. S. G. Dean	Howe	Dr. W. P. Rudell	Calhoun
Dr. W. M. Duff	Braden	Dr. E. E. Shippey	Wister
Dr. Harrell Hardy	Bokoshe	Dr. M. A. Stewart	Heavener
Dr. J. J. Hardy	Poteau	Dr. J. B. Wear	Poteau
Dr. A. G. Hunt	Howe	Dr. B. D. Woodson	Poteau
Dr. G. A. Morrison	Poteau		

LINCOLN COUNTY

Dr. J. W. Adams	Chandler	Dr. C. L. Kerfoot	Prague
Dr. W. G. Bisbee	Chandler	Dr. A. M. Marshall	Chandler
Dr. W. H. Davis	Chandler	Dr. C. M. Morgan	Chandler
Dr. J. J. Evans	Stroud	Dr. F. H. Norwood	Prague
Dr. H. M. Fagaines	Chandler	Dr. W. A. Pendergraft	Carney
Dr. S. E. Gayman	Agra	Dr. H. M. Williams	Wellston
Dr. J. O. Glenn	Stroud	Dr. J. C. Williams	Stroud
Dr. R. H. Hannah	Prague	Dr. F. W. Wyman	Stroud
Dr. J. H. Jansing	Tryon		

LOGAN COUNTY

Dr. Chas. B. Barker	Guthrie	Dr. J. L. Houseworth	Guthrie
Dr. E. O. Barker	Guthrie	Dr. Benton Lovelady	Guthrie
Dr. Pauline Barker	Guthrie	Dr. J. L. Melvin	Guthrie
Dr. F. J. Boutin	Coyle	Dr. C. S. Petty	Guthrie
Dr. A. G. T. Childers	Mullhall	Dr. Lewis Philips	Seward
Dr. C. F. Cotterall	Guthrie	Dr. H. C. T. Richmond	Marshall
Dr. Fred Y. Cronk	Guthrie	Dr. J. H. Rinchart	Meridian
Dr. John W. Duke	Guthrie	Dr. W. W. Rucks	Guthrie
Dr. F. B. Erwin	Wellston	Dr. Esther Ryerson	Guthrie
Dr. P. F. Erwin	Wellston	Dr. David Stevens	Guthrie
Dr. L. A. Hahn	Guthrie	Dr. E. L. Underwood	Crescent
Dr. Chas. B. Hill	Supply	Dr. A. A. West	Guthrie

LOVE COUNTY

Dr. D. Autry	Marietta	Dr. J. J. Boutin	Coyle
Dr. W. V. Batson	Marietta	Dr. T. J. Jackson	Marsden
Dr. C. A. Beeler	Burneyville	Dr. A. E. Martin	Marietta

MAJOR COUNTY

Dr. J. Victor Anderson	Fairview	Dr. Elsie L. Specht	Fairview
Dr. B. F. Johnson	Fairview		

MARSHALL COUNTY

Dr. M. D. Belt	Woodville	Dr. J. L. Holland	Madill
Dr. T. A. Blaylock	Madill	Dr. E. F. Lewis	Kingston
Dr. W. L. Davis	Kingston	Dr. J. A. Rutledge	Woodville
Dr. W. H. Ford	Kingston	Dr. W. H. Ussery	Lebanon
Dr. J. I. Gaston	Dallas, Texas	Dr. O. E. Wellborn	Kingston
Dr. John A. Haynie	Aylesworth	Dr. S. P. Winston	McMillan
Dr. W. D. Haynie	Powell		

MAYES COUNTY

Dr. J. L. Adams	Pryor	Dr. J. L. Mitchell	Pryor
Dr. J. B. Bewley	Miami	Dr. E. L. Pierce	Locust Grove
Dr. W. C. Bryant	Chouteau	Dr. J. R. Preston	Adair
Dr. T. R. Connally	Mazie	Dr. Carl Puckett	Pryor
Dr. J. E. Hillis	Pryor	Dr. S. C. Rutherford	Chouteau
Dr. W. D. Hill	Choteau	Dr. J. L. Wharton	Salma
Dr. J. E. Hollingsworth	Strang	Dr. W. J. Whitaker	Pryor
Dr. J. D. Leonard	Strang	Dr. L. C. White	Adair

MURRAY COUNTY

Dr. J. A. Adams	Sulphur	Dr. W. H. Powell	Sulphur
Dr. H. C. Bailey	Sulphur	Dr. G. W. Slover	Sulphur
Dr. J. C. Luster	Davis	Dr. J. T. Slover	Sulphur
Dr. A. V. Ponder	Sulphur	Dr. W. M. Tucker	Sulphur

MUSKOGEE COUNTY

Dr. S. W. Aiken	Muskogee	Dr. J. B. Lightfoot	Muskogee
Dr. H. T. Ballantine	Muskogee	Dr. A. J. Lovell	Dalhart, Tex.
Dr. W. D. Berry	Muskogee	Dr. P. S. Mitchell	Yale
Dr. J. L. Blakemore	Muskogee	Dr. P. P. Nesbitt	Muskogee
Dr. Benj. H. Brown	Muskogee	Dr. W. B. Newton	Muskogee
Dr. J. Murice Brown	San Antonio, Tex.	Dr. J. T. Nichols	Muskogee
Dr. Edwin Davis	Haskell	Dr. J. G. Noble	Muskogee
Dr. J. J. Dial	Muskogee	Dr. B. P. Norvell	Steelville, Mo.
Dr. C. E. DeGroot	Muskogee	Dr. I. B. Oldham	Muskogee
Dr. R. N. Donnell	Muskogee	Dr. J. H. Plunkett	Porum
Dr. H. S. Drummond	Wainwright	Dr. J. G. Rafter	Muskogee
Dr. K. M. Dwight	Muskogee	Dr. Brown W. Randel	Muskogee
Dr. A. N. Earnest	Muskogee	Dr. Harvey O. Randel	Muskogee
Dr. A. W. Everly	Muskogee	Dr. D. M. Randel	Muskogee
Dr. F. W. Ewing	Muskogee	Dr. John Reynolds	Muskogee
Dr. W. O. Fischer	Muskogee	Dr. C. V. Rice	Muskogee
Dr. F. B. Fite	Muskogee	Dr. C. T. Rogers	Muskogee
Dr. W. E. Floyd	Muskogee	Dr. H. C. Rogers	Muskogee
Dr. S. J. Fryer	Muskogee	Dr. J. Hoy Sanford	Muskogee
Dr. C. M. Fullenwider	Muskogee	Dr. H. A. Scott	Muskogee
Dr. E. F. Garlington	Porter	Dr. J. W. Sosbee	Webbers Falls
Dr. J. R. Graves	Council Hill	Dr. Arthur L. Stocks	Muskogee
Dr. A. W. Harris	Muskogee	Dr. J. H. Stolper	Muskogee
Dr. C. W. Heitzman	Muskogee	Dr. C. A. Thompson	Muskogee
Dr. C. L. Hill	Haskell	Dr. M. K. Thompson	Muskogee
Dr. J. S. Hollingsworth	Douglas, Ariz.	Dr. W. T. Tilly	Muskogee
Dr. Sessler Hoss	Muskogee	Dr. J. S. Vittum	Muskogee
Dr. O. H. Howell	Oktaha	Dr. F. L. Walton	Muskogee
Dr. W. R. Joblin	Porter	Dr. J. C. Warnack	Muskogee
Dr. R. E. Jones	Braggs	Dr. F. E. Warterfield	Muskogee
Dr. Emma Starr Keith	Muskogee	Dr. J. Hutchings White	Muskogee
Dr. O. C. Klass	Muskogee	Dr. Fred J. Wilkiemeyer	Muskogee
Dr. John Lee	Haskell	Dr. J. H. Woodcock	Muskogee

MCINTOSH COUNTY

Dr. Dyton Bennett	Texanna	Dr. F. L. Smith	Fame
Dr. G. W. Graves	Hitchita	Dr. A. J. Snelson	Checotah
Dr. N. P. Lee	Checotah	Dr. W. A. Tolleson	Eufaula
Dr. D. E. Little	Eufaula	Dr. L. K. Trusecott	Onapa
Dr. J. H. McCulloch	Checotah	Dr. B. J. Vance	Checotah
Dr. A. B. Montgomery	Checotah	Dr. J. C. Watkins	Checotah
Dr. J. N. Shaunity	Eufaula	Dr. G. W. West	Eufaula

McCLAIN COUNTY

Dr. O. O. Dawson	Wayne	Dr. W. C. McCurdy	Purcell
Dr. I. N. Kolb	Dibble	Dr. C. B. Smith	Washington
Dr. T. C. McCurdy	Purcell	Dr. J. W. West	Purcell

McCURTAIN COUNTY

Dr. J. B. Chastain	Broken Bow	Dr. E. Goodwin	Broken Bow
Dr. A. W. Clarkson	Valliant	Dr. O. O. Hammond	Broken Bow
Dr. J. H. Davis	Idabel	Dr. C. R. Huckabay	Valliant
Dr. B. L. Denison	Garvin	Dr. W. Burns McCaskill	Idabel
Dr. A. S. Graydon	Idabel	Dr. C. R. McDonald	Broken Bow

McCURTAIN COUNTY (Continued)

Dr. C. T. McDonald	Garvin	Dr. D. O. Spencer	Valliant
Dr. A. T. Moreland	Idabel	Dr. G. O. Todd	Bismark
Dr. W. A. Moreland	Idabel	Dr. R. D. Williams	Idabel
Dr. W. L. Moore	Broken Bow	Dr. O. W. Wilson	Dodsonville, Texas
Dr. P. M. Richardson	Millerton	Dr. N. D. Wood	Millerton

NOBLE COUNTY

Dr. S. F. Bradford	Billings	Dr. Chas. P. Murphy	Red Rock
Dr. D. F. Coldiron	Red Rock	Dr. B. A. Owen	Perry
Dr. Frank L. Keeler	Perry	Dr. T. F. Renfrow	Billings
Dr. Lambertus Kuntz	Perry	Dr. Bruce Watson	Perry
Dr. O. E. Lovelady	Red Rock		

NOWATA COUNTY

Dr. J. E. Brookshire	Nowata	Dr. Wm. Nairn	Nowata
Dr. E. F. Collins	Nowata	Dr. M. B. Scott	Delaware
Dr. J. R. Collins	Nowata	Dr. L. T. Strother	Nowata
Dr. J. B. Haggard	S. Coffeyville	Dr. J. P. Sudderth	Nowata
Dr. D. D. Howell	Nowata	Dr. J. G. Thomas	Alluweg
Dr. A. L. Kurtz	Nowata	Dr. G. A. Waters	Lenapah
Dr. D. M. Lawson	Nowata		

OKFUSKEE COUNTY

Dr. C. M. Bloss	Okemah	Dr. J. C. Pitchford	Castle
Dr. W. H. Davis	Castle	Dr. L. A. Nye	Okemah
Dr. W. P. Griffith	Weleetka	Dr. J. S. Rollins	Paden
Dr. H. A. May	Okemah	Jno. L. Sims	Weleetka
Dr. J. M. Pemberton	Okemah	Dr. B. Watts	Okemah

OKLAHOMA COUNTY

Dr. J. M. Alford	Oklahoma City	Dr. Ruth A. Gay	Oklahoma City
Dr. E. P. Allen	Oklahoma City	Dr. H. H. Gipson	Oklahoma City
Dr. L. E. Andrews	Oklahoma City	Dr. Karl Hass	Harrah
Dr. F. M. Bailey	Oklahoma City	Dr. J. F. Hall	Oklahoma City
Dr. A. B. Baird	Oklahoma City	Dr. J. R. Hamill	Oklahoma City
Dr. C. E. Barker	Oklahoma City	Dr. J. E. Harbison	Oklahoma City
Dr. A. Bee	Oklahoma City	Dr. J. S. Hartford	Oklahoma City
Dr. A. L. Blesh	Oklahoma City	Dr. J. L. Hoshall	Oklahoma City
Dr. F. J. Bolend	Oklahoma City	Dr. R. M. Howard	Oklahoma City
Dr. Rex G. Bolend	Oklahoma City	Dr. R. L. Hull	Oklahoma City
Dr. John A. Brooke	Oklahoma City	Dr. Lewis E. Inman	Oklahoma City
Dr. T. A. Buchanan	Oklahoma City	Dr. W. J. Jolly	Oklahoma City
Dr. T. C. Burns	Oklahoma City	Dr. J. F. Kelly	Oklahoma City
Dr. L. H. Buxton	Oklahoma City	Dr. J. F. Kuhn	Oklahoma City
Dr. F. K. Camp	Oklahoma City	Dr. E. S. Lain	Oklahoma City
Dr. A. B. Chase	Oklahoma City	Dr. G. A. LaMotte	Oklahoma City
Dr. P. C. Christian	Oklahoma City	Dr. N. E. Lawson	Oklahoma City
Dr. W. R. Clement	Jennings	Dr. Wm. Langsford	Oklahoma City
Dr. H. H. Cloudman	Oklahoma City	Dr. T. L. Lauderdale	Oklahoma City
Dr. C. E. Clymer	Oklahoma City	Dr. C. E. Lee	Oklahoma City
Dr. Paul H. Crawford	Oklahoma City	Dr. W. P. Lipscomb	Oklahoma City
Dr. W. C. Cummings	Oklmulgee	Dr. LeRoy Long	Oklahoma City
Dr. S. R. Cunningham	Oklahoma City	Dr. T. R. Longmire	Oklahoma City
Dr. A. E. Davenport	Oklahoma City	Dr. R. E. Looney	Oklahoma City
Dr. E. F. Davis	Oklahoma City	Dr. J. C. Mahr	Oklahoma City
Dr. C. R. Day	Oklahoma City	Dr. J. T. Martin	Oklahoma City
Dr. W. E. Dicken	Oklahoma City	Dr. J. A. Maxwell	Oklahoma City
Dr. W. E. Dixon	Oklahoma City	Dr. J. F. Messenbaugh	Oklahoma City
Dr. E. T. Earnheart	Oklahoma City	Dr. L. J. Moorman	Oklahoma City
Dr. Joseph T. Edward	Oklahoma City	Dr. S. L. Morgans	Oklahoma City
Dr. R. T. Edwards	Oklahoma City	Dr. D. D. McHenry	Oklahoma City
Dr. C. D. Ferguson	Oklahoma City	Dr. Geo. D. McLean	Oklahoma City
Dr. E. S. Ferguson	Oklahoma City	Dr. O. P. McNair	Oklahoma City
Dr. C. J. Fishman	Oklahoma City	Dr. L. A. Newton	Oklahoma City
Dr. T. H. Flesher	Edmond	Dr. N. R. Nowlin	Oklahoma City
Dr. W. A. Fowler	Oklahoma City	Dr. J. R. Phelan	Oklahoma City
Dr. W. A. Fullington	Oklahoma City	Dr. J. S. Pine	Oklahoma City
Dr. Fred F. Fulton	Oklahoma City	Dr. J. A. Reck	Oklahoma City
Dr. George Fulton	Oklahoma City	Dr. Horace Reed	Oklahoma City

OKLAHOMA COUNTY (Continued)

Dr. Lea A. Riely	Oklahoma City	Dr. H. C. Todd	Oklahoma City
Dr. J. W. Riley	Oklahoma City	Dr. C. W. Townsend	Oklahoma City
Dr. M. M. Roland	Oklahoma City	Dr. C. O. Von Wedel	Oklahoma City
Dr. J. B. Rolater	Oklahoma City	Dr. W. J. Wallace	Oklahoma City
Dr. L. M. Sackett	Oklahoma City	Dr. L. F. Watson	Oklahoma City
Dr. W. T. Salmon	Oklahoma City	Dr. M. W. Weir	Oklahoma City
Dr. F. M. Sanger	Oklahoma City	Dr. Eva Wells	Oklahoma City
Dr. Winnie M. Sanger	Oklahoma City	Dr. W. W. Wells	Oklahoma City
Dr. M. Smith	Oklahoma City	Dr. A. K. West	Oklahoma City
Dr. F. B. Sorgatz	Oklahoma City	Dr. L. M. Westfall	Oklahoma City
Dr. J. W. Stevens	Oklahoma City	Dr. A. W. White	Oklahoma City
Dr. S. N. Stone	Edmond	Dr. A. A. Will	Oklahoma City
Dr. M. E. Strait	Oklahoma City	Dr. Ira J. Wood	Jones
Dr. E. S. Sullivan	Oklahoma City	Dr. H. H. Wynne	Oklahoma City
Dr. C. B. Taylor	Oklahoma City	Dr. A. D. Young	Oklahoma City
Dr. W. M. Taylor	Oklahoma City	Dr. A. M. Young	Oklahoma City

OKMULGEE COUNTY

Dr. J. E. Bercau	Okmulgee	Dr. C. M. Ming	Okmulgee
Dr. V. Berry	Okmulgee	Dr. W. C. Mitchener	Okmulgee
Dr. H. E. Breese	Henryetta	Dr. R. Mooney	Henryetta
Dr. W. G. Brymer	Dewar	Dr. J. L. Riley	Henryetta
Dr. Oscar S. Burrow	Wetunka	Dr. Ira W. Robertson	Henryetta
Dr. W. M. Cott	Okmulgee	Dr. N. N. Simpson	Henryetta
Dr. T. O. Crawford	Beggs	Dr. M. T. Smith	Okmulgee
Dr. A. H. Culp	Beggs	Dr. W. L. Stephenson	Henryetta
Dr. A. H. Herr	Okmulgee	Dr. Geo. W. Tilly	Dewar
Dr. A. R. Holmes	Henryetta	Dr. L. B. Torrance	Okmulgee
Dr. F. H. Hollingsworth	Beggs	Dr. Clarence E. Wellman	Coalton
Dr. Wm. W. Kingman	Henryetta	Dr. R. L. Westover	Okmulgee

OSAGE COUNTY

Dr. W. H. Aaron	Pawhuska	Dr. W. H. Lane	Fairfax
Dr. Thos. M. Berry	Hominy	Dr. Benj. Skinner	Pawhuska
Dr. T. J. Colley	Hominy	Dr. H. L. Summers	Osage
Dr. K. L. Colley	Bigheart	Dr. Harry Walker	Pawhuska
Dr. C. H. Dewey	Washington, D. C.	Dr. Roscoe Walker	Pawhuska
Dr. Geo. W. Goss	Pawhuska	Dr. Divonis Worten	Pawhuska
Dr. J. J. Fraley	Hominy		

OTTAWA COUNTY

Dr. A. M. Cooter	Miami	Dr. T. P. McNaughton	Miami
Dr. F. A. DeTar	Miami	Dr. W. L. McWilliams	Miami
Dr. F. M. Edwards	Amarillo, Texas	Dr. Blair Points	Wyndotte
Dr. J. B. Hampton	Commerce	Dr. H. D. Shankle	Afton
Dr. R. H. Harper	Afton	Dr. R. F. Von Cannon	Miami
Dr. J. C. Jacobs	Miami	Dr. M. P. Willis	Commerce
Dr. E. A. Leisure	Fairland	Dr. F. L. Wormington	Miami
Dr. C. O. Lively	Tar River		

PAWNEE COUNTY

Dr. C. W. Ballaine	Cleveland	Dr. H. B. McFarland	Oilton
Dr. C. E. Beitman	Skedee	Dr. G. H. Phillips	Chillaco
Dr. W. Kelly	Terlton	Dr. E. T. Robinson	Cleveland
Dr. J. L. Lehw	Pawnee	Dr. E. M. Thompson	Cleveland
Dr. Earl D. McBride	Ralston		

PAYNE COUNTY

Dr. C. W. Bacon	Yale	Dr. J. S. Jacoby	Cushing
Dr. C. H. Beach	Glencoe	Dr. D. F. Janeway	Stillwater
Dr. J. H. Cash	Glencoe	Dr. H. C. Manning	Cushing
Dr. L. A. Cleverdon	Stillwater	Dr. J. B. Murphy	Stillwater
Dr. Benj. Davis	Cushing	Dr. H. McQuown	Stillwater
Dr. E. M. Harris	Cushing	Dr. C. E. Sexton	Stillwater
Dr. R. W. Holbroke	Perkins	Dr. C. D. Simmons	Stillwater
Dr. W. B. Hudson	Yale	Dr. Chas. N. Sleybaugh	Yale
Dr. Eli Hughes	Stillwater		

PITTSBURG COUNTY

Dr. J. H. Baker	Indianola	Dr. Chas. J. Brunson	Adamson
Dr. F. J. Baum	Savanna	Dr. J. A. Burnett	Hartshorne
Dr. V. H. Barton	McAlester	Dr. H. N. Bussey	Pittsburg
Dr. I. S. Chapman	McAlester	Dr. L. C. Kuyrkendall	McAlester
Dr. J. E. Davis	McAlester	Dr. T. H. McCarley	McAlester
Dr. J. W. Echols	McAlester	Dr. Wilson McClellan	McAlester
Dr. M. H. Foster	Alderson	Dr. R. A. Munn	Ashland
Dr. J. Paul Gay	McAlester	Dr. J. P. Nelson	Dow
Dr. J. Worth Gray	Denver, Col.	Dr. T. T. Norris	Crowder
Dr. W. C. Graves	McAlester	Dr. R. K. Pemberton	McAlester
Dr. A. Griffith	McAlester	Dr. O. W. Rice	Alderson
Dr. J. O. Grubbs	McAlester	Dr. W. W. Sames	Hartshorne
Dr. W. P. Hailey	Haileyville	Dr. Graham Street	McAlester
Dr. A. J. Harris	McAlester	Dr. J. A. Smith	McAlester
Dr. Chas. T. Harris	Kiowa	Dr. E. H. Troy	McAlester
Dr. Ed. D. James	Haileyville	Dr. G. S. Turner	Krebs
Dr. C. A. Johnson	Kiowa	Dr. F. L. Watson	McAlester
Dr. J. C. Johnston	McAlester	Dr. L. S. Willour	McAlester
Dr. George A. Kilpatrick	McAlester		

PONTOTOC COUNTY

Dr. J. G. Breco	Ada	Dr. M. L. Lewis	Ada
Dr. W. A. Bullock	Allen	Dr. M. C. McNew	Ada
Dr. R. T. Castleberry	Ada	Dr. H. D. Meredith	Ada
Dr. R. J. Craig	Ada	Dr. J. T. Mills	Saskaw
Dr. I. L. Cummings	Ada	Dr. J. L. Moyse	Maxwell
Dr. B. B. Dawson	Ada	Dr. C. L. Orr	Ada
Dr. J. A. Dean	Ada	Dr. L. M. Overton	Fitzhugh
Dr. W. D. Faust	Ada	Dr. S. M. Richey	Francis
Dr. Edith Harrison	Stonewall	Dr. S. P. Ross	Ada
Dr. Fred Harrison	Stonewall	Dr. B. F. Sullivan	Stonewall
Dr. T. A. Hill	Roff	Dr. F. S. Sturdevant	Vanoss
Dr. J. L. Jeffress	Roff	Dr. Catherine Threlkeld	Ada
Dr. R. F. King	Ada	Dr. C. S. Wilkerson	Roff

POTTAWATOMIE COUNTY

Dr. A. K. Allis	Wanette	Dr. E. E. Goodrich	Tecumseh
Dr. R. M. Anderson	Shawnee	Dr. E. J. Gray	Tecumseh
Dr. G. H. Applewhite	Shawnee	Dr. G. S. Hartshorne	Shawnee
Dr. M. A. Baker	Shawnee	Dr. J. E. Hughes	Shawnee
Dr. W. A. Ball	Wanette	Dr. R. C. Kaylor	McLoud
Dr. G. S. Baxter	Shawnee	Dr. A. C. McFarling	Shawnee
Dr. Chas. Blickensderfer	Shawnee	Dr. W. M. McGee	McAllen Tex.
Dr. W. C. Bradford	Shawnee	Dr. G. H. Owen	Meeker
Dr. R. A. Brown	Prague	Dr. W. D. Philips	Maud
Dr. W. R. Butler	Maud	Dr. H. M. Reeder	Asher
Dr. J. M. Byrum	Shawnee	Dr. E. E. Rice	Shawnee
Dr. Z. T. Calhoun	Tribbey	Dr. T. D. Rowland	Shawnee
Dr. H. G. Campbell	Asher	Dr. J. H. Royster	Wanette
Dr. F. L. Carson	Shawnee	Dr. T. C. Sanders	Shawnee
Dr. Geo. W. Colvert	Tecumseh	Dr. J. H. Scott	Shawnee
Dr. U. S. Cordell	Romulus	Dr. J. M. Stooksbury	Shawnee
Dr. J. Culbertson	Maud	Dr. H. A. Wagner	Shawnee
Dr. J. E. Cullom	Earlsboro	Dr. J. E. Walker	Earlsboro
Dr. C. Farrington	Shawnee	Dr. J. A. Walker	Shawnee
Dr. W. N. Farris	McComb	Dr. M. A. Warhurst	Sylvian
Dr. J. L. Fortson	Tecumseh	Dr. A. J. Williams	McLoud
Dr. W. M. Gallaher	Shawnee	Dr. H. H. Wilson	Shawnee

PUSHMATAHA COUNTY

Dr. B. M. Huckabay	Tuskahoma
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ROGER MILLS COUNTY

Dr. B. M. Ballinger	Hamburg	Dr. J. E. Gray	Durham
Dr. W. S. Cary	Rankin	Dr. J. P. Miller	Cheyenne
Dr. T. T. Clohesy	Grimes	Dr. J. A. Pryor	Avard
Dr. Lee Dorrah	Hammon	Dr. Geo. H. Wallace	Cheyenne
Dr. V. V. Grant	Roll	Dr. W. I. Wimberley	Hammon

ROGERS COUNTY

Dr. F. A. Anderson	Claremore
Dr. A. M. Arnold	Claremore
Dr. E. Y. Bass	Talaha
Dr. W. H. Cooley	Busheyhead
Dr. T. B. Dickson	Ramona
Dr. C. V. Elliott	Inola
Dr. J. A. Ewell	Catoosa
Dr. J. H. Haley	Catale
Dr. W. F. Hays	Claremore
Dr. T. W. Hensal	Oglesby
Dr. H. L. Hillie	Collinsville
Dr. W. A. Howard	Chelsea
Dr. Lawson Hughes	Collinsville
Dr. Henry F. Knabb	Foyil
Dr. A. N. Lerskov	Claremore

Dr. Caroline Bassman	Claremore
Dr. J. C. Busheyhead	Claremore
Dr. H. W. Callahan	Collinsville
Dr. J. F. Means	Claremore
Dr. E. Pleas	Collinsville
Dr. L. C. Presson	Collinsville
Dr. J. C. Smith	Catoosa
Dr. J. F. Smith	Oologah
Dr. W. E. Smith	Collinsville
Dr. J. M. Stemmons	Oologah
Dr. Geo. Strickland	Claremore
Dr. J. C. Taylor	Chelsea
Dr. J. G. Waldrop	Claremore
Dr. J. W. Wright	Collinsville

SEMINOLE COUNTY

Dr. W. R. Black	Little
Dr. T. F. Harrison	Wewoka
Dr. J. R. Holliday	Sasakwa
Dr. W. T. Huddleston	Konawa
Dr. R. Keyes	Schoolton
Dr. W. L. Knight	Wewoka
Dr. H. A. Kiles	Konowa

Dr. E. R. McAlester	Seminole
Dr. J. M. McPherson	Sasakwa
Dr. M. M. Turlington	Seminole
Dr. G. B. Van Sandt	Wewoka
Dr. A. J. Weeden	Sasakwa
Dr. J. T. Williams	Konawa
Dr. A. H. Yate	Konawa

SEQUOYAH COUNTY

Dr. J. C. Breedlove	Muldrow
Dr. C. Bryan	Vian
Dr. W. T. Bryan	Vian
Dr. J. A. Check	Sallisaw
Dr. T. W. Collins	Muldrow
Dr. J. A. Eichling	Gore
Dr. E. P. Green	Hanson
Dr. A. A. Hicks	Muldrow

Dr. W. M. Hunter	Vian
Dr. S. B. Jones	Sallisaw
Dr. S. A. McKeel	Sallisaw
Dr. J. A. Morrow	Sallisaw
Dr. C. H. Morris	Vian
Dr. I. M. Woods	Vian
Dr. T. B. Woods	Sallisaw

STEPHENS COUNTY

Dr. J. S. A. Applig	Doyle
Dr. T. C. Barnes	Marlow
Dr. J. P. Bartley	Comanche
Dr. H. A. Conger	Duncan
Dr. J. P. Cowman	Comanche
Dr. Edw. DeMeglio	Oklahoma City
Dr. H. C. Frie	Duncan
Dr. C. E. Frost	Duncan
Dr. P. M. Haraway	Marlow
Dr. C. M. Harrison	Comanche
Dr. D. Long	Duncan

Dr. D. M. Montgomery	Marlow
Dr. R. L. Montgomery	Marlow
Dr. J. A. Mullin	Marlow
Dr. J. W. Neiweg	Duncan
Dr. B. J. Plunkett	Duncan
Dr. C. C. Pruitt	Comanche
Dr. C. C. Richards	Marlow
Dr. W. S. Spears	Velma
Dr. E. B. Thomason	Velma
Dr. J. O. Wharton	Duncan
Dr. S. H. Williamson	Duncan

TEXAS COUNTY

Dr. R. B. Hayes	Guymon
Dr. W. H. Langston	Guymon

Dr. James McMillin	Goodwell
Dr. Wm. J. Risen	Hooker

TILLMAN COUNTY

Dr. J. E. Arrington	Frederick
Dr. O. G. Bacon	Davidson
Dr. W. J. Brinks	Manitou
Dr. J. W. Collier	Tipton
Dr. G. A. Comp	Manitou
Dr. Burton Fain	Frederick
Dr. A. B. Fair	Frederick
Dr. W. A. Fuqua	Loveland
Dr. J. A. Gillis	Frederick
Dr. J. H. Hansen	Grandfield
Dr. A. J. Hays	Frederick
Dr. J. B. Hix	Tipton

Dr. C. A. Howell	Hollister
Dr. Carl Lefforge	Frederick
Dr. M. M. McKellar	Loveland
Dr. L. A. Miethell	Frederick
Dr. J. D. Osborn, Jr.	Frederick
Dr. F. J. Priestly	Frederick
Dr. H. L. Roberts	Frederick
Dr. F. E. Rosenberger	Grandfield
Dr. T. F. Spurgeon	Frederick
Dr. R. E. Wilson	Davidson
Dr. Harper Wright	Grandfield

TULSA COUNTY

Dr. P. N. Atkins	Tulsa	Dr. J. F. Capps	Tulsa
Dr. W. W. Beesley	Tulsa	Dr. H. C. Childs	Tulsa
Dr. J. C. Bland	Tulsa	Dr. Fred S. Clinton	Tulsa
Dr. W. W. Brodie	Tulsa	Dr. G. H. Clulow	Tulsa
Dr. G. H. Butler	Tulsa	Dr. W. A. Cook	Tulsa
Dr. C. E. Calhoun	Sand Springs	Dr. E. F. Dutton	Tulsa
Dr. A. V. Emerson	Tulsa	Dr. R. E. L. Rhodes	Tulsa
Dr. R. A. Felt	Tulsa	Dr. J. W. Rogers	Tulsa
Dr. M. J. Ferguson	Tulsa	Dr. W. H. Rogers	Tulsa
Dr. Onis Franklin	Broken Arrow	Dr. A. W. Roth	Tulsa
Dr. F. A. Glass	Tulsa	Dr. R. V. Smith	Tulsa
Dr. Ross Grosshart	Tulsa	Dr. M. P. Springer	Tulsa
Dr. S. D. Hawley	Tulsa	Dr. J. C. Stevens	Drumwright
Dr. E. F. Hayden	Tulsa	Dr. E. F. Stroud	Tulsa
Dr. M. A. Houser	Tulsa	Dr. W. J. Trainor	Tulsa
Dr. J. S. Hume	Tulsa	Dr. R. S. Wagner	Tulsa
Dr. H. D. Irvan	Tulsa	Dr. G. A. Wall	Tulsa
Dr. L. D. Latham	Tulsa	Dr. J. E. Wallace	Tulsa
Dr. W. G. Lemmon	Tulsa	Dr. H. P. Ward	Leonard
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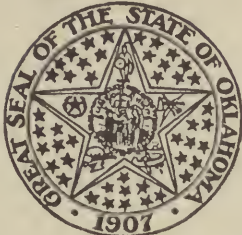
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EARLY DIAGNOSIS OF PULMONARY TUBERCULOSIS*

W. W. RUCKS, M. D., Guthrie, Okla.

In endeavoring to make an early diagnosis of pulmonary tuberculosis, it is well that we should understand that not all lesions giving the appearance of incipient tuberculosis are recent infections, but expressions of activity in old or latent lesions. In fact it is quite probable that in the majority of instances when a diagnosis is made of tuberculous toxemia it originates from activity in a latent focus of infection. And it is not at all improbable that an infection from without in an adult who had never had a tuberculous infection, if such a person could be found, would be a thing of rapid progress and would soon pass beyond the stage of incipency into advanced tuberculosis. Then it is altogether likely that what is called an early diagnosis in pulmonary tuberculosis is the detection of activity in a latent lesion.

I would not be understood as saying that infections from without always produce violent symptoms, for it is quite possible that many people have entirely recovered from one or more implantations of tubercle bacilli with the consequent development of immune bodies to the extent that further infection from without would produce milder symptoms than would be found in the persons who did not have these healed lesions with the consequent development of immune bodies to give him resistance. And the inoculation must be of sufficient number of bacilli to overcome this resistance or no symptoms will result. Immunity is a relative thing giving varying degrees of protection, so also is infection a relative thing governed not so much by the nature but by the massiveness of the attack.

From this we may readily see that the character of evidence of active pulmonary tuberculosis will depend upon whether the toxemia is from activity in a latent lesion, or from an infection from without in a person with a relative degree of immunity, or upon the massiveness of the infection, or in an individual who has never developed immunity from previous infections. The two latter account for the cases that begin abruptly and frequently are diagnosed as pneumonia or typhoid fever. It is the two former from which the great number of people are suffering and with which we have most to deal.

It should be remembered that latent tuberculosis is not healed tuberculosis. Any tuberculosis which produces symptoms now and then, even though they be slight, cannot be looked upon lightly, and should be considered as a danger. When toxins escape from a latent focus, the patient usually feels somewhat tired and nervous, and if persisted in for a long time the patient has a feeling of depression and of being run down. When these symptoms occur often or become pronounced

*Read in Symposium on Tuberculosis, Section on General Medicine, Oklahoma City, May 10, 1916.

we must consider that the latent focus is becoming active and that there is a danger of the process assuming a state of acute inflammation with a spread of the infection.

To be able to recognize the presence of tuberculous toxins by certain signs and symptoms, and to detect the presence of immune bodies, which presuppose an infection, by certain tests, are the fundamental principals on which a diagnosis must be made. In appearance a patient suffering from early tuberculosis may not differ from any other member of society. There are quite a number of patients suffering from early clinical tuberculosis who are of robust build and who are carrying on their usual avocations with comparative ease. If we wait for that classical phthisical appearance associated with a cough and heavy expectoration and profound pallor and great prostration, then our only object in diagnosis would be that the patient be given instruction relative to the care of his habits that he might not infect others. But the patient who comes to us in comparative health so far as his appearance is concerned, complaining of being tired, in a run down condition, perhaps loss of appetite, irritable, nervous, demands a careful examination on our part. And if these conditions continue they are very suggestive of tuberculous intoxication from an incipient infection or from a latent lesion which is showing some activity.

The symptoms are grouped by Pottinger into three classes, those caused by the toxins, those of reflex origin, and those due to the tuberculous process per se.

Symptoms due to toxins, malaise, lack of endurance and nervous instability are common symptoms of active tuberculosis; when an old tuberculous process becomes active or a new infection occurs patients are very apt to note that they do not want to move or be disturbed and yet they cannot see any reason for it, sleep and rest do not refresh them. It is nothing they can explain, nothing they can fully understand; yet there is a consciousness that something is wrong. Tasks which were formerly easy are now accomplished with difficulty, a little effort is followed by exhaustion from which recovery is slow. Slight elevation of temperature 99.2 to 99.4, if persistent or recurring frequently, is of diagnostic value, especially when accompanied by the symptoms which I have mentioned due to the tubercle toxins. Acceleration of the pulse may also be caused by the toxemia, which is especially noticeable on exertion, and as the process advances it returns to normal very slowly after being disturbed, a characteristic which also applies to the temperature. There is no regularity in the severity of the symptoms produced by toxemia because the amount of toxins differ so markedly in different patients. One patient will suffer greatly and show most of the symptoms mentioned which are caused by toxemia, and another will hardly realize that he is not well, and may hardly complain at all. The latter patient should have the best chance for recovery unless the very mildness of his symptoms should cause a delayed or mistaken diagnosis.

Symptoms of reflex origin—Hoarseness, slight in early cases, more marked as the disease advances. Tickling in larynx with a slight dry cough is due, like hoarseness, to a stimulation of the pulmonary ends of the vagus by the inflammation in the lung causing a disturbance in the recurrent laryngeal. Indigestion can be caused both by toxemia and reflex irritation. Reflex chest pains are quite common in this disease especially in the older lesion, and it is not uncommon for a person suffering from latent tuberculosis to state that he has had rheumatic pains through his shoulders and chest muscles.

Symptoms due to the tuberculous process itself—Frequent colds, long protracted colds, starting or ending as a bronchitis, frequent attacks of la grippe. Blood spitting is most generally due to tuberculosis. Pleurisy is also a very suggestive symptom. In addition to these symptoms we may have some physical signs which may be detected, among the earliest of which would be muscular rigidity, which is a sign described by Pottenger in 1909. It consists of a spasm of the muscles over the area infiltrated caused by the irritation transmitted to the muscles

from the inflamed area in the lungs. This sign is not unlike the rigid abdomen caused by appendicitis and has the same underlying cause, nerve irritation.

In incipient apical tuberculosis the rigidity can readily be detected by palpating the muscles, and when the process is active these muscles stand out prominently, giving the affected side a fuller appearance. After long duration atrophy takes place in the muscles and the appearance of fullness is lost.

While writing this a patient presented for examination, complaining of being unusually tired, having no ambition, nervous and irritable, having lost several pounds in weight in the past two months, and stating in answer to questions that for the past 8 years he had had similar attacks of depression from which he would eventually recover and regain his weight. On exposing the chest I immediately noticed a fullness about his left apex, the right was quite hollow especially the supra clavicular space. On palpation the muscles about the left apex were quite rigid while those about the right were flabby and atrophied, the interpretation of which I considered an old lesion in the right apex which had periods of quiescence and periods of activity, and had been in existence sufficiently long to cause muscular atrophy. In the apex of the left side was an active lesion causing muscular rigidity.

Pottenger mentions another physical sign based on the muscular rigidity. And that is lagging, the affected side does not move as freely as the other. Auscultation and percussion will always be of great value, but in very early tuberculosis they do not give to me a great deal of information, though auscultated cough may disclose rales which could be detected in no other way and a complete and full examination by all methods possible should in no wise be neglected.

If a patient presenting a good number of the signs and symptoms mentioned can be found to have actively present in his blood elements of resistance which his cells have produced to combat a tubercular infection, then we should have no hesitation in saying that our diagnosis is complete.

The cutaneous tuberculin tests are tests not for tuberculosis but for tuberculosis antibodies. And antibodies are present in the blood because of the stimulation of the body cells, to their production, by the protien which escaped from the tuberculous focus, and this focus may be either a new infection or activity in a latent lesion. Tuberculin is specific and will not react in a healthy person, nor will a healed lesion give a reaction after the lapse of sufficient time for the excessive amount of antibodies which were required for the defense of the body, and which were called forth by the stimulation of the toxins produced during the state of activity, have passed away. Then a tuberculin reaction should mean an active lesion, a latent lesion with activity or a recently healed lesion. Therefore I am quite satisfied that when a person shows signs and symptoms of an intoxication without some other very apparent cause and gives an active tuberculin reaction, we are justified in saying such a person is tuberculous.

TUBERCULOSIS*

HORACE REED, M. D., F. A. C. S.,

Associate Professor of Surgery, University of Oklahoma

A footnote in a school text on physiology, which was in common use some twenty-five years ago, contained the following quotation: "I believe that consumption is a disease, the existence of which depends upon the state of nutrition of the afflicted. If I should develop consumption, I would live out of doors day and night and eat plenty of meat and bread."

About four years after I read the above quotation, I had good cause for remembering it.

Now, I am from a so-called tuberculous family, and was reared in a community where tuberculosis claimed its victims in nearly every household, and where it

*Read in Symposium on Tuberculosis, Section on General Medicine, Oklahoma City, May 10, 1916.

was universally believed that once a person became a consumptive there was no hope but for a starry crown. For the consumptive the treatment usually consisted in calling the preacher for the purpose of having him pray over the victim. This procedure usually resulted in the production of considerable lachrymation and the death-bed confession of the dying.

I sometimes think that the ideas and beliefs of that old neighborhood in Tennessee have become widely disseminated in Oklahoma, for, even among the physicians here, there are a goodly number, I am sorry to say, who apparently do not believe that tuberculosis can be cured. And to those I cite an example.

Twenty or more years ago I sat alone in a room one beautiful spring morning. All winter long a racking cough had shaken my frame; I was weak and emaciated; I was tired. Outside the buds were bursting, the birds were singing their songs of love, while through the open window the gentle breeze bore to me the fragrance of sweet flowers. How I hungered for life! for health!

While thus I sat musing, I overheard a remark from conversation in an adjoining room. I do not know who made this particular remark, but it was as follows: "Poor fellow; just listen at that awful cough. When the buds of another spring burst forth, they will do so over his untimely grave."

I was provoked, I was angered, and in this state of feeling I deliberately walked into that other room and announced, angrily, I fear, that I called the bet. It was indeed a gamble, but remembering the quotation in the old physiology, I applied it, indeed with none too much hope, but, with the result that I am able to stand before you today. If any of you really believe that once a consumptive, always a consumptive, I ask that you go with me to the Savoy, set before me a nice cut of rare roast beef, and the necessary prerequisites, and I will demonstrate the quality of consumption with which I am now affected.

It may seem to some of you that I am out of place, when I appear before you and attempt to speak on tuberculosis. You are assured that no attempt will be made to enlighten you in what I shall have to say. It is my intention to try to remind you of the mistakes we have made and are still making, and since I happen to know more about my crimes than those committed by others, I am free to confess, at least, that I am as guilty of committing the things herein charged as is the average man.

But seriously, tuberculosis is indeed a condition which demands the attention of all of us, and I, as one who limits himself to the practice of a particular branch in the large field of medicine, find it necessary almost daily to discuss with patients the questions quite numerous which confront the afflicted. The personal matters which have been here recorded are detailed for a definite purpose, which purpose we hope will answer for an apology.

Up to quite recently, tuberculosis had been a problem; now it is more a condition. Formerly the diagnosis could not be easily made except in patients in the terminal stages while the treatment was probably worse than useless; now it can be diagnosed, and diagnosed early in the vast majority of cases, and the treatment has been so definitely outlined and thoroughly demonstrated, that we are confronted largely with the matter of applying what we have learned. In other words, it is up to the medical profession to do its duty to the end that the patients, who are being infected with the bacillus of tuberculosis, may have their disease arrested, and further, that eventually the disease may be entirely eradicated. Are we doing our whole duty? My answer would be, "I fear not." The layman is waking up, and is now all but ready to indict us with charges of ignorance, or carelessness, or of both.

There are hundreds of sanatoriums scattered over various parts of our country that are caring for thousands of patients coming from all parts of the land, curing and educating the many—ask the patients who have been educated in these sani-

toriums what their opinion of the medical profession is in its relation to the tuberculous—or without asking, simply put your ear to the ground and you will hear the rumblings of bitter criticism rapidly increasing. Let us be frank with ourselves. Let us face the facts. We are careless; we are indifferent—at least indifferent when we consider the major position which tuberculosis occupies in the theatre of diseases affecting mankind.

Now, in what ways do we err? We will mention a few instances. How many of us have made a conscientious effort to keep thoroughly posted in the progress of the knowledge on tuberculosis? If the number who have availed themselves of the literature is very considerable, it stands to reason that the knowledge thus gained is not being generally applied. If I were to undertake to prove this assertion here, I would do so by putting this question: How many of you make a positive diagnosis of early tuberculosis by the demonstration of the bacillus in the sputum? The majority would answer aye. Do not the facts show that while the bacillus is always the causative factor, its appearance in the sputum is demonstrable very rarely except in the fairly well advanced cases? Has it not been shown time and again that the bacillus may never appear in the sputum throughout all stages of the disease, even unto the end? And that when the bacillus does appear, it means that there is an open lesion—one that communicates with a large air passage—an ulcer, or even a cavity? It is a fact that these mistakes are being made with the results that we dilly dally with the patient until the end is approaching and then make another sad mistake by advising that there be a change of climate.

But there is much evidence to show that many of us have not supplied ourselves with the proper implements of battle. I would be charitable enough to think that the physician who would advise deep breathing and mountain climbing for a patient with an active lesion was ignorant rather than criminal; that he who would indiscriminately employ tuberculin in treatment of patients affected with tuberculosis was himself a victim of mental relapse rather than that he had designs, ulterior, on the patient's welfare. The hundreds and thousands of patients who fall into sanatoriums are telling some strange things about us. This is not a product of my imagination; it is fact. Is it altogether ignorance on our part that we make these mistakes? Let us see.

We received fundamental training in physical diagnosis. We were taught that a carefully taken history is of immense value in helping to arrive at a diagnosis. Do we do these things properly? How many of us percuss over the chest and listen by means of the stethoscope through the patient's clothing and then say that we have made an examination? Of what value is such an examination? We grow careless, or else get too busy, and by our default the enemy marches on. These are unpleasant charges to make against oneself and yet we must not deceive ourselves. Are we victims of the rather general belief that to become infected with the tubercle bacillus constitutes a disgrace. If so, then the great majority acknowledge ourselves stigmatized whether we know it or not for we are all exposed and most of us infected as has been abundantly demonstrated clinically—and by post mortem. Why should we be ashamed if we are struck with a stray bullet while fighting in the midst of battle where the bullets are flying thick and fast?

Yet, there are those who resent being told that they have tuberculosis and stoutly maintain that their family is free from such taint. There are spineless physicians, or physicians unscrupulous, who from ulterior motives agree with such patients and make desirable diagnoses for such patients when all the facts would call for the contrary. Is this just?

Let him who has a family history of tuberculosis be ashamed of it if he desires. Let him whose parents gave him strong limb and body be proud of it, but teach such who contract the disease that the occurrence constitutes no reflection upon the parent or child, and that it is nothing which reflects upon the good name of his family tree even unto himself. He may have been inoculated while going

about his usual vocation, or even while on some mission of charity bent. Or it may have been that as he knelt in church in the act of devotion he kicked up dust containing the tubercle germs of some departed saint and breathed them in. To become infected under present conditions is not a disgrace nor does the fact of infection spell ruin.

For examples, I like to think of the heroes, both living and dead, who did battle with the foe—of the great and strenuous one of all Americans who is far from inactive although there were those who some 3 1-2 years ago forecasted that he would never bob up again. The strenuous one as a young man, pale, weak and sickly came west and was cured—now he shows his teeth and empires pay their respect.

I like to think of a great American surgeon, than whom in my estimation there is none greater, who without blushing or any sign of feeling of chagrin refers to the time when as a "lunger" he spent time on the plains of the Southwest. Last, but not least I like to think of the noblest Roman of all—him who overcame the impossible, made new conditions and established a new philosophy for the afflicted, who in spite of advanced and incurable tuberculosis and the adverse prognostication of the eminent men of his time, lived 42 years, a lingering death, during which time he did more to enlighten us on the question of the treatment of tuberculosis than any other man living or dead. If you would know this hero, read his autobiography—Edward Livingstone Trudeau.

Let us wake up, for we are somnolent. Let us trim our callouses, for our sensibilities to the largeness of the fight before us have become blunted by too much familiarity. It is not a new problem but an old one made new by an improvement in our armament and a sincere desire to progress.

The time is coming when every death certificate which is given for a tuberculosis victim will virtually be a record of someone's blunder. Let us help to hasten that day, and when it does come let us be in a position to make sure that no one of our body can ever have it said of him "you did not do your duty."

A LAYMAN'S VIEWS ON TUBERCULOSIS*

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A layman's views may seem out of place at a medical meeting, and my only excuse for expressing a layman's opinion is the fact that there are two sides to every case, whether the case is a medical one or a legal one. My views on the subject of tuberculosis are similar to those of many other tubercular patients who are honestly studying their own cases and the subject of tuberculosis in general.

The ignorance of patients on all medical subjects is proverbial among physicians. Any physician can tell scores of incidents, illustrating the medical ignorance or foolishness of patients with whom he has come in contact. It may be more of a surprise to the average physician to know that most tuberculosis patients can tell from their own experience numbers of instances illustrating the ignorance of physicians in the diagnosis and treatment of tubercular cases.

I am going to say some things about the average physician which may possibly be resented, but I am not saying them with any bitterness, and even if my remarks cause resentment I shall not regret it, if that resentment causes the physician to study more carefully the whole subject of tuberculosis, and particularly its diagnosis. I do not know and make no pretense of knowing anything about anatomy or medicine and my study of tuberculosis has been confined largely to observations of some hundreds of patients and intimate talks and acquaintance with the inmates of sanatoriums combined with a study of the statistics gathered by life insurance companies and by the Association for the Study and Prevention of Tuberculosis.

*Read in Symposium on Tuberculosis, Section on General Medicine, Oklahoma City, May 10, 1916.

My first observation of tuberculosis was in Colorado Springs, where I lived for ten years in one boarding-house, in which the number of tubercular boarders averaged from 15 to 20. This ten-year period was from 1891 to 1901. During that ten years I met and became intimately acquainted with at least three or four hundred tubercular patients.

In 1901 I left Colorado Springs and since then have been in Oklahoma City most of the time. For fifteen years I gave little further thought to the subject of tuberculosis until learning last fall that I was a victim. Since last October I have lived most of the time in sanatoriums and spent three months last winter in a sanatorium in one of the arid, Rocky Mountain sections. Sanatorium patients swap experiences and talk freely to each other. I noted a marked difference in the attitude of patients I met this year as compared with the patients whom I had known intimately in Colorado.

Twenty years ago patients were longing for a specific or panacea which they hoped some physician would discover. They looked upon tuberculosis as an almost hopeless disease and one in which the cure depended upon the climate and the patient's own ability to wear out the disease. Each patient looked upon himself as doomed, but he hoped against hope that he might be one of the fortunate few who would be cured by the climate. The patient's attitude now is utterly different. Everyone feels that a cure has been found and the only question of recovery is whether or not his case was diagnosed early enough and whether his money and his will-power will carry him through the necessary process of recovery. Twenty years ago there was no thought of blame upon the physician. Now almost every patient will relate, both with bitterness and sadness, how he went to two or three physicians for treatment before he finally found a physician who was able to diagnose his case as tuberculosis.

In the sanatorium where I remained three months last winter I became intimately acquainted with about fifteen of the patients. I heard the minute details of their first visits to a physician. Of the fifteen cases referred to, there was just one which was diagnosed as tubercular in the first instance. The patient was a lady who had a brother who had been fighting tuberculosis for a year or two, and when the first symptoms developed, she went immediately to a specialist in tuberculosis. Of the other fourteen cases, not one of them had been to less than three physicians before one was found who could or did discover the cause of their illness. In four instances, the patients had gone to the fourth physician before a correct diagnosis was made. The usual diagnosis in the first instance was malaria, nervous prostration or simply a generally run down condition, which would require a tonic, and a little care of diet and exercise. All of these patients were from well-to-do homes. None of them were paying less than \$30 a week for their accommodations at the sanatorium, and it is not likely that they went to physicians who were not in good standing. Many of them came from cities of more than 50,000 population.

One of the men who had been to three physicians during a period of some eight or nine months was told by the third one that he had nervous prostration and that he should go fishing. He went out to the Gulf Coast near Galveston, put on rubber boots and stood in the water for three or four hours at a time. After five weeks of this treatment, he was sent to a hospital where the fourth physician examined him and pronounced his case tuberculosis.

Doubtless many of you will say that these instances are unusual and not typical. Probably they are worse than the average, but if every physician could hear the bitterness with which those patients tell of their experience, he would have a graver sense of his responsibility in looking for tuberculosis among his own patients.

Fortunately one New England sanatorium for tuberculosis has kept a record of 1,000 cases and investigated their diagnosis, tabulating the results. These 1,000 cases had consulted 1940 physicians prior to an examination by the physician

at the sanatorium. Only 7 per cent. of the 1940 physicians took all the usual means available to make a correct diagnosis. In this examination the sanatorium considered that but three things were necessary to a correct diagnosis, namely, a physical examination of the bared chest, the taking of temperature and the examination of the sputum. 1,085 physicians, or 55 per cent., made a physical examination only, and of that number 151 did not even remove the patient's clothing. Some physicians took the temperature only, and some examined the sputum only. 197, or more than 10 per cent., made no examination of any kind. 31 of the cases were found non-tubercular. 148, or 14.8 per cent., were classed as incipient and the remainder were moderately advanced cases or far advanced cases.

What chance is there for the patients, if less than 15 per cent. of discovered cases are incipient? What chance is there to discover an incipient case from the examination of the sputum only, when often the sputum test is not positive until the case is past the incipient stage? All sanatorium records show that even in advanced cases the sputum does not always show positive, and with the same patient it may show positive one day and negative the next. Many patients never have a positive sputum.

What chance is there for an incipient case when the physician takes the temperature only and often takes that temperature on only one occasion? All physicians know that in tuberculosis, a patient seldom has fever during the morning hours, and that even in advanced cases patients will go many days without showing fever at all. Sanatorium records show that the highest temperature is usually about four o'clock in the afternoon. Frequently patients will show fever for a few days and then for a week will show none. It is, therefore, of no value for a physician to take the temperature at one time, unless it should happen to show fever at that particular time.

My own experience is more or less typical of what usually happens to a tubercular patient. I had never thought of tuberculosis in connection with my own health, but I had noticed a lack of appetite and a lack of energy for some months. Occasionally I would have indigestion or a bilious spell. I was going East last summer and thought while away I would stop at a famous sanatorium in Michigan and take the baths and treatment and incidentally be thoroughly examined, as all patients are supposed to be. While there I passed through the hands of two or three physicians and my physical examination was made by one of the oldest physicians on their staff. I was stripped to the waist and examined with a stethoscope and also by percussion; my temperature was taken and found to be sub-normal. As my examination was made at nine o'clock in the morning this was not surprising. I was sent to the X-ray examiner and placed in a radiscope. I suppose the physician looked through me for a minute or two. The usual blood and urine and other examinations were made and I was told that I was in a run-down condition and needed exercise. My weight showed a loss of several pounds below normal and they put me on a fattening diet, gave me numerous baths and prescribed abundant exercise. They did this, regardless of the fact that I had been playing tennis and golf two or three days a week, which is more exercise than many people get. Naturally, exercise was the worst thing I could have, and I steadily lost weight while at the sanatorium and came away feeling worse than when I went there. Yet I had been told that I had no organic trouble.

A few weeks later I had a sick spell, with nausea, and a physician told me I had malaria and I spent several weeks in Colorado dosing on quinine. When I returned to Oklahoma City I worked as usual for two or three weeks and again had a severe nausea and headache. It was purely by accident that the physician I called was a specialist in tuberculosis. He was a good personal friend of mine, and it was for that reason that I called him, and not because I had any suspicion of tuberculosis. When he saw me, he asked to make a physical examination, and before he finished tapping my chest with his fingers, I knew that I had tuber-

culosis, without his saying a word. He tapped on one side of my chest and then in the corresponding location on the other side. The difference in the sound could have been heard by anyone in the room. This was a comparatively few weeks after I had been examined in Michigan, and it is impossible that I should not have been a plain case of tuberculosis at the first examination. A ten-year-old boy who could tell a ripe watermelon from a green one by thumping on it, could have told the difference in the sound of the two sides of my chest, and if he had been told that healthy lungs sounded like a ripe water-melon, and that a moisture-filled lung sounded like a green water-melon, he could have told me that I had tuberculosis and in which lung it was located. An X-ray showed that I had numerous scar tissue spots which were of many years standing, probably from infections years ago in Colorado, yet the physician with the radioscope apparently did not see them.

The physician who made my physical examination in Michigan doubtless examines 1,000 patients every year and has done so for ten years. When physicians like that are so careless, what can a patient expect from the average physician who sees a comparatively small number of patients?

Since studying the available statistics about tuberculosis, I have been astonished to find that almost no physician is familiar with them. Few physicians seem to realize that more than ten per cent. of all deaths in United States are due to tuberculosis. The latest available figures were in 1914, when ten and a half per cent. of all deaths were from tuberculosis. This means that if you are an average physician, one-tenth of your present patients and one-tenth of your future patients are going to die of tuberculosis. I think it is fair to assume that one-half of the tubercular patients now recover from that disease and their death is recorded from some other cause. If that is true, one in five of your patients is going to be or is a tubercular patient. Post-mortem records of American hospitals show that 98% of all autopsies disclose tubercular infection. This means that if eventually 20 per cent. of the population have diagnosed cases of tuberculosis, almost the entire remaining 80 per cent. have the disease in incipient form and nature overcomes it or it does not progress to the point of diagnosis.

In considering the fact that more than ten per cent. of all deaths in the United States are caused from tuberculosis, this includes the deaths of infants and children under fifteen years of ages, and also includes the deaths of many people beyond the age of fifty. Statistics show that a very small per cent. die of tuberculosis under fifteen years of age and also that after the age of fifty, the deaths from that cause rapidly diminish.

Now, I take it that most physicians find the majority of their patients between the ages of fifteen and fifty and if so, the percentage of tubercular cases which develop among their patients should be even higher than one in five.

It seems to me that the average physician pays no attention to what I will call the usual channels of tuberculosis. For instance, I have never found a physician who knew that he had six times the chance of finding tuberculosis in a jeweler than he has in a banker, yet the experience tables of one of the largest life insurance companies in the world shows that 57 1-2 per cent. of jewelers who die between the ages of fifteen and forty-five, die from tuberculosis. Few physicians seem to know that tuberculosis is found more among stone-cutters and marble-workers than in any other general vocation. Cigar makers and tobacco-workers are second; plasterers and white-washers, third; printers and pressmen come fourth, and servants fifth. Bankers and corporation officials are the lowest in a list of fifty-three vocations. More than 47 per cent. of all printers who die between the ages of fifteen and forty-five die of tuberculosis. Isn't it worth while for a physician to know something about the hazard of occupation?

It will surprise most physicians to know that according to the records of the National Association for the Study and Prevention of Tuberculosis, 90 per cent. of all tuberculosis cases are found in abodes of four rooms or less, while 93 per cent.

of all cases are found in abodes of five rooms or less. This leaves only 7 per cent. of the cases among people living in houses or apartments larger than five rooms. So we see that small houses and crowded quarters make another natural channel for the development of tuberculosis.

The third natural channel for tuberculosis is the family history. Every physician knows that a much larger percentage of cases develop in families where the parent, grandparent, the brother or sister have had tuberculosis, and yet many physicians never inquire into the family history. I have been tempted to say that there is another natural channel in which to locate tuberculosis, but it should really be a subhead under the hazard of vocation. I refer to the greater number of cases among males than among females. Do you know that in New York City last year only 58 per cent. as many females died of tuberculosis as there were males? This means that in New York City, at least, the deaths among men are almost two to one greater than among women.

Sanatorium records show that about nine out of ten patients recover when they commence treatment in the incipient stage. When treatment is commenced in a moderately advanced stage, about 40 per cent. make complete recovery. When the case is discovered in an advanced stage, the patient's chances are less than one in ten. It depends on you, the family physician, whether the patient has ten chances to one of recovery, or only one chance in ten. A few months' time may make all the difference between an incipient case and one moderately advanced. Sometimes there is only a few months difference between an incipient case and a far advanced one. It is deplorable but true that on the tomb-stone of the average victim of tuberculosis, the epitaph could truthfully be written: "Died of Tuberculosis, Through the Ignorance or Carelessness of My Family Physician."

I have never run across a physician in general practice who knew that one civilized country had absolutely stamped out tuberculosis and a physician sent by the U. S. Government to report on that circumstance, has so reported. That country is the province of Victoria, Australia. There every physician is paid \$2.50 for reporting a case of tuberculosis. Every school teacher is examined for tuberculosis before being allowed to teach. Every immigrant is examined before being admitted into the country. Every case is isolated in the home or in a sanatorium. Infection is, therefore, prevented at the very outset of the discovery. In America we allow advanced cases, whose sputum is infectious, to mingle at will among healthy people.

I have referred to the three means of diagnosing tuberculosis, but I want to refer to a fourth, which is the taking of the blood pressure. In the absence of other complications, the tubercular patient always has a low blood pressure and if I were a physician, I would suspicion every adult whose blood pressure was under 115. It is of no use to take blood pressure, however, unless you have an accurate instrument.

Recently I went to an office building in this city, where my blood pressure was taken with five instruments, borrowed from four different physicians in the same building. The two instruments which depended upon a column of mercury for the measurement, registered exactly alike. The three instruments which depended upon a spring dial and needle, gave three different results—one was a point above the mercury instruments, one was 5 points below, and the other 10 points below. A patient's blood pressure might have registered 125 or 115, depending upon which physician he called. The importance of blood pressure is recognized by all insurance agencies, but it seems to me it is recognized by few physicians. No physician would keep a thermometer which was ten degrees from accurate.

I recognize that the public's ignorance of tuberculosis is far greater than that of the physician, and if the people knew that 6 per cent. of all the milk sold in the average city was tuberculous, they would become frightened, but neither

the public nor physicians seem to know that the post-mortem records of infants who die between the ages of six months and twelve months show that 22 per cent. of them have tubercular infection. Statistics show that about 3 per cent. of school children have tuberculosis, but there is no record of how many school teachers are spreading the disease among their pupils.

I believe that the law should provide for medical inspection of every school teacher. I believe that employers of labor should have a medical examination of all their employes at least once a year. As tuberculosis kills more people than any other disease and one civilized country has shown that it is possible to stamp it out, I believe it should be the duty of physicians and the public to unite in a serious effort to stamp it out of the United States.

AN INSPIRATION FROM A CHAPTER IN THE HISTORY OF TUBERCULOSIS*

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With few exceptions, the things worth while are evolved in the minds of men who are fired by the subtle power of inspiration. This is particularly true of men in the medical profession. The beacon lights appearing along the slowly charted shores of disease have been planted there by those members of the profession who have had the smoldering embers of desire fanned into flame by an impelling inspiration. Though the source of this inspiration may never be divined, save by the soul it leads, it lights a fire that no difficulties can dim, that no obstacles can extinguish.

The history of tuberculosis from the time of Hippocrates to the middle of the nineteenth century is a melancholy recital, but beginning with this date, there is a chapter in the history of this disease that should prove a source of inspiration to every member of the medical profession, regardless of the difficulties under which he labors. Time will permit of only a brief reference to those men who have been conspicuous in the wonderful progress made in the control of this, the most prevalent disease known to the human race.

In 1840, George Boddington, an obscure country practitioner living in England, published an essay on "The Cure of Pulmonary Consumption on Principles Natural, Rational and Successful." In this notable essay, Boddington dwelt upon the importance of a generous diet and fresh air day and night. He also gave further advice in regard to exercise and general treatment. Prior to this time, there had been established in England a few hospitals where consumptives could be cared for, but Boddington founded the first sanatorium in the world. It is stated that for several years prior to the publication of his views, Boddington had practiced these principles and affected many apparent cures, but upon the publication of this essay, he was regarded as a lunatic. Much opposition was aroused and his patients were driven from his institution, which was converted into an asylum for the reception of the insane.

However, the flame was not extinguished. Brehmer, living in a town of less than a thousand people, read the essay of this obscure country doctor and founded upon the principles of Boddington the sanatorium treatment of tuberculosis and in 1859, in the face of ridicule and opposition, he opened his sanatorium at Goerbersdorf, which became the largest private institution of its kind in the world.

In 1870, Dettweiler, while performing his duties as an army surgeon, contracted tuberculosis and resigning from the army became a patient at Goerbersdorf. Having regained his health, he became an assistant of Brehmers, and in 1873 published his first work upon the "Treatment of Consumption." After six years work with Brehmer, he established his famous sanatorium at Falkenstein, which immediately became a Mecca for students of tuberculosis from all parts of the

*Prepared for the Oklahoma City Academy of Medicine.

world. Dettweiler instituted the open air rest cure on the reclining chair, which we see so extensively employed in this country today. "He founded the sanatorium for the consumptive poor, and it is to his initiative that Germany is now indebted for its many institutions of this sort."

In the year 1866, Robert Koch received the degree of Doctor of Medicine, and after serving a short time as assistant physician in a general hospital in Hamburg, and a short time in the general practice of medicine, he considered seriously the question of coming to this country with a view of taking up the practice of medicine in St. Louis. However, he soon became district physician in Woolstein where he remained until he was called to the Imperial Board of Health in Berlin in 1880. While yet an unknown, busy, country doctor, he carried on investigations on Anthrax and traumatic infective diseases, and thus did pioneer service in a virgin field and opened the road which has led to the modern discoveries in the causation, prevention, and treatment of infectious disease, thus taking his stand with the immortal Pasteur as the founder of bacteriology and the germ theory of disease.

When Koch had definitely proven the specific cause of Anthrax, "it is narrated that this country doctor went to Breslau, taking with him his microscope and white mice for the purpose of repeating the experiments in the presence of Ferdinand Cohn, the botanist, Cohnheim, Weigert, and others. The demonstration made a profound impression. Cohnheim is said to have told the workers in his laboratory, "Let everything stand as it is and go over to Koch; this man has made a great discovery which in its simplicity and exactness of method deserves only the more admiration because he is cut off from all scientific connections, and has himself worked out everything to absolute completion. There is nothing at all more to do." Having proved beyond a doubt that bacteria caused disease, Koch now set about to find the special bacteria of individual diseases. In addition to the many other important discoveries, for it is said of Koch, "Rarely, if ever, have so many discoveries of such decisive importance to mankind emanated from the activities of one person;" he announced in 1882 the discovery of the tubercle bacillus, perhaps the most important event in the history of medicine. Eight years later, he announced the discovery of tuberculin, which has materially influenced the treatment of tuberculosis. "When we consider the advancement medicine owes to Robert Koch, and the endless and inestimable blessing which has come to mankind through his work and life, there comes an overpowering sense of admiration, reverence and gratitude."

This brief reference to the life work of Robert Koch would seem a fitting conclusion, if it were not for the fact that the most inspiring gospel in the history of medicine is to be found in the remarkable career of Edward Livingston Trudeau, who through his unparalleled courage and optimism, emerged from his self-appointed exile to illumine the annals of medical science, to warm the world with his wonderful personality, and to bring to mankind a new philanthropy.

In 1872, ten years before Koch discovered the tubercle bacillus, Trudeau was carried into the Adirondack Mountains, forty-two miles from the nearest railroad, with no hope of recovery, but to satisfy a longing for the hills and streams where he had hunted and fished during his vacations. This hopeless invalid, after many months of judicious living, with no precedent to guide him, regained his health, and finally outlived the three robust friends who took turns staying in the wilderness with the dying doctor. One of these was Trudeau's life-long friend, E. H. Harriman. Those of you who were not already familiar with the wonderful work of Trudeau certainly have been impressed with the quickening influence of his life as portrayed in the many beautiful tributes to his memory which have recently appeared in all parts of the world. Time will not permit a detailed account of Trudeau's struggles and achievements, but the following paragraph from a personal tribute by Dr. James Alexander Miller will suggest to some extent the scope of this romantic life.

"The early struggle with tuberculosis in a severe form at the very outset of his medical career, contracted from nursing his brother, who died from the same disease in a room kept purposely overheated with windows tight closed and no precautions taken against the then unknown dangers of infection; the pioneer bravery with which he faced the winter rigors of the Adirondack forests, as an experimental test of a theory which no one had before attempted; the five years of mental and physical inaction in which he calmly matched his spirit and endurance against the relentless tuberculosis; the gradual return toward health, accomplished by an awakening of that intense love of the woods and those instincts of the true sportsman which ran in his blood direct from his nomadic father, resulting in many months of life in the open, hunting and fishing with no thought of his profession or of other more serious purposes in life; the imagination, so evidenced in the later days, grasping the possibility of helping others as he had been helped, and thus in 1884 resulting in the feeble beginning of his now famous Adirondack Cottage Sanitarium; his latent scientific sense quickened by Koch's discovery of the tubercle bacillus as the cause of tuberculosis leading to laboratory investigation, and later in 1894 to the erection of the first laboratory exclusively devoted to the study of tuberculosis; then the gradual development of Saranac Lake as a great health center, equipped through his efforts with "a splendid institution built and maintained by funds amounting to nearly two million dollars, raised almost exclusively through his personal appeal and innumerable friendships; the surrounding of himself with a corps of physicians fired by his enthusiasm to a devotion to the ideals which he cherished, and which have made the Saranic spirit what it is today; his contribution to scientific knowledge looking toward the prevention and cure of tuberculosis, and then in the natural and inevitable course of events, the gradual recognition of his work throughout the country and the world, until finally he was universally acclaimed the leader and guiding spirit of the whole anti-tuberculosis movement in this country; all of this accomplished, in spite of well-nigh constant struggle with his own disease, represents a life story well fitted to fire the imagination and to kindle the wonder and admiration with which it has already been received."

These five men beginning work in obscurity, cut off from medical libraries and laboratories, by making use of the means at their command, discovered the cause of tuberculosis, made possible its early diagnosis, worked out a rational course of treatment, and succeeded in establishing a line of defense against the conquering hosts of death, and for the first time in the history of the world inaugurated successful warfare with the arch enemy of mankind, the tubercle bacillus, and thus established, as it were, the watershed between fatalism and hope, between tuberculosis incurable and tuberculosis curable.

Discussion of Papers of Drs. Rucks and Reed and Mr. Gaylord

Dr. Freeman: If I could have had some one to write a paper I would have had just the papers I have heard today. I wish to speak to you of the menace of tuberculosis and the possibility of getting away from it. As this man has said, we are careless and we are indifferent. Let me say this first. I have been fifteen years in the government service among the Indians. I have seen a lot of it, more than you can think. I came here to see the legislators. There must be something done; tuberculosis is a preventable disease; tuberculosis is an infectious disease; tuberculosis is a disease allowed to run riot all over the land. Nobody is ever quarantined. Did you ever have anyone tell you that they were glad to be quarantined? That they thought it was right? No! Here is a disease more deadly and more dangerous than scarlet fever, yet we do nothing to keep people from catching it. You may go anywhere you please, among the Indians particularly, and if any of you are below par you are liable to become infected. You are doing it for your children, the children unborn. Now if you are going to do anything with this we have to be united. You have got to put tuberculosis

on the same ground as diptheria, scarlet fever or smallpox. You have got to take the same preventive care if you are going to clean it out of the United States. It is easier to control if you take it early. Ninety per cent. of the early cases are cured. We have twenty deaths that could have been controlled, but you cannot do it with Indians. We have got to control the Indians in this state. They are Uncle Sam's wards. I am trying to interest some of the senators in Washington. I may do some good there, but we have to work together and I want to interest you. I would like to say something that would touch every one, for it is a fact that it is controllable, it is preventable, and it is the most deadly thing we have to control. If anyone is reported to have a contagious disease what do you do?

Why can't we take the same precaution with tuberculosis as we do with the other things? I want to get it into your hearts and minds and then we will have results.

Dr. L. J. Moorman: I am very glad to have heard these excellent papers on tuberculosis. I have never heard more impressive papers than these read this afternoon. Each essayist has aimed at a definite end, and I am sure good has been accomplished.

In regard to Dr. Ruck's paper on early diagnosis, he has beautifully portrayed the various steps necessary to make a diagnosis. If every physician in the state would practice what Dr. Ruck's paper teaches, a much larger per cent. of cases might be diagnosed early. Having made a diagnosis of tuberculosis, it becomes the physician's duty to make plain to the patient and the family the danger of carelessness, and to teach them the approved methods of prevention.

The physicians of Oklahoma should unite in an effort to bring about governmental control of tuberculosis; especially should open cases be isolated either at home or in sanatoria. If they are allowed to remain at home, they should be under inspection of an officer of the state.

Tuberculosis has been practically stamped out of the province of Victoria, Australia, by organized effort and governmental control. In this province doctors are paid \$2.50 for every case of tuberculosis reported, instead of being censured for not reporting it.

Tuberculosis has been completely stamped out of herds of cattle by proper care and housing by isolating all infected cattle and by keeping the young from exposure. Surely if this can be done with cattle, there is hope for common people.

Going back to the question of diagnosis, I think we should be careful not to "lay too much store" by the tuberculin test. If it is positive, as Dr. Ruck explains, it should be considered as merely an aid in diagnosis. If it is decidedly positive in the first twenty-four hours, it becomes of more value, thus suggesting active tuberculosis. However, I have seen cases with the bacilli in the sputum, yet negative to the skin test.

There is only one safe way to the diagnosis of tuberculosis, and that is by thorough systematic history taking and examination, employing all the means mentioned in the paper on diagnosis.

Dr. Kelso: The subject of the diagnosis has been the bane of the medical profession since the beginning of time. We all fall down from the simple fact that we do not make the proper diagnosis. Generally it is the easiest thing in the world to control the cases if we make the proper diagnosis. We become too indolent. In fact we appear to our patient in the same way our patient appears to us. It is a fact that as a rule the general practitioner does not take time to examine his patient. That is a travesty on the medical profession, but it is a truth which we cannot deny. That is why the laity come here and read a paper before this association, that I was glad personally to hear, even if he does pull us over the coals. I will say for the benefit of the good gentleman, that you never knew a tubercular patient but what had a good flow of language. It has been demonstrated. Wescott died of tuberculosis. Stevenson was one of the most

brilliant men of his age, and you can see the brilliancy we have had from tuberculars, as we look over statistics. There are fifty doctors in this house; there is not one in four who has a work on hygiene in his library. However, gentlemen, we are going to attend to this and prevent the city editor coming to us and pulling us over the coals. It may take us a long time, but if we can prevent smallpox, if we can vaccinate and prevent typhoid fever, why not do as we should and prevent tuberculosis? I am glad Dr. Moorman brought up the question that we should register with the health officer our tubercular cases. How many report your diphtheria patients, your typhoid fever patients, your scarlet fever patients? Your early diagnosis of tuberculous patients will save us from being raked over the coals by the laity when in session.

Dr. Fishman: It impresses me that tuberculosis is a dollar and cent proposition, not because the doctor gets the dollars and cents, but the poor people among whom the need is greatest are minus the dollars and cents that the doctor gets from looking at his tongue. The only thing we can do is to start the spark and trust that our legislature will give us the help that they can. Unfortunately the man who needs the help is the man who cannot get the things needed. A man usually has to work, if not for himself, for himself and family, and it is unfortunate that such a man cannot go to the specialist; it is a question of poverty rather than of late diagnosis at the present time, because the better class of people, those who can afford the diagnosis from the better class of physicians, have an early diagnosis, and in 90 per cent. in time to prevent death, and I think with the problem of tuberculosis, we should consider it from the point of poverty stricken people, and those who need the treatment worst. It is a fact that a diagnosis in many instances is not properly made, but there are score of cases where the diagnosis is made, and made early, where the physician is unable to help the ones for whom help is needed. There must be an awakening of the laity before the physicians can do what we know has to be done. Here is a mother of five children. The father works for \$1.25 a day to support the mother and children. The mother has tuberculosis. My advice was to put the mother to bed and give her treatment. She said; "We cannot possibly do it. It takes all we make to live when I do the work." That is a situation the doctor cannot possibly meet, and until that changes and we can get sufficient legislation to assist in the isolation, to assist in the employment of specific means to conform the diagnosis the general practitioner makes, the tuberculosis condition is going to continue to spread among the people.

Dr. Martin: I wish to thank Mr. Gaylord for his presence here, therefore, I move we extend a vote of thanks for his excellent paper. Motion carried.

Dr. Rucks: I am very much gratified with these special points that have been brought out in regard to tuberculin tests not always bringing out the reaction. The social problem Dr. Fishman mentioned I think we all recognize; the state should take care of tuberculosis, not only the poor ones but anyone who wants to take the treatment. Thank you.

Mr. Gaylord: I want to speak for one newspaper at least, that we would be very glad to carry some publicity to interest the public in tuberculosis, and I am sure other papers will do the same. I just want to add this one word, that I made a trip to New York to make an address before the newspapers; some 300 papers were represented. I might say that my paper created a sensation, and they agreed to have it put in pamphlet form. My subject there was along the line of medical examination of employees. I think many employers will do this and I think they will find many incipient cases which otherwise would not be discovered until they were too far advanced.

Dr. L. J. Moorman: Dr. Fishman brought up a question which I would like to refer to briefly. He says: "It is often a question of dollars and cents and on account of the poverty of the individual suffering from tuberculosis the physician's hands are often tied." What he says is true, and what we need in the state

is that medical profession get behind a campaign of publicity through the press and the schools, and thus create public sentiment that will influence legislation, and untie the physician's hands. We, as physicians, must get a clear vision of our duty as citizens and teach the people the significance of the sociological side of this question. We must teach the people that it is actually ten or fifteen times cheaper to take care of a case of tuberculosis than it is to let it die.

THE ROLE OF HEREDITY IN THE CAUSE AND TREATMENT OF DISEASE*

CHARLES WILLIAM HEITZMAN, M. D., Muskogee, Okla.

Though knowledge of genetics of normal characters in man has advanced so little, we have now clear evidence as to the laws of descent followed by many striking peculiarities which are of the nature of deformity or disease. It is somewhat singular that nearly all of the abnormal features (except those which are sex-limited) that have been positively shown to follow Mendelian rules in man are dominant to the normal. There are indications that certain abnormal conditions are recessive, but in two of these only is there much evidence. Dominants are of course, much easier to trace, as the peculiarity then descends directly from parent to offspring, and so a continuous history is provided. Probably it is to this circumstance that the comparative plenty of evidence respecting the dominant is due.

Immunity—The first type of evidence that we will discuss is the study of immunity. It is well known that some natives are relatively immune to yellow fever; this is now a heritable quality; the question is whether it can be regarded as originally an acquired character. Was it in origin a modification of the bodily metabolism subsequent upon the disease? It seems very difficult to adopt this interpretation, and most authorities incline to the other alternative of regarding immunity as a constitutional variation which has become dominant in the race by the elimination of those members who are not immune.

It may be objected, however, that there are cases where a mother rabbit or guinea-pig has been artificially rendered immune to certain diseases, and has afterwards, had young born immune. This may be due to a kind of infection before birth, some anti-toxin or other having probably passed from the mother to the unborn young.

Medical Arguments—A medical argument which has convinced many is somewhat as follows. Its cogency rests on the difficulty of drawing hard-and-fast defining lines. It is alleged that a pregnant woman with small-pox may infect her unborn offspring—a clear case of intra-uterine contagion. A tubercular mother may have an offspring without tuberculosis, but with something wrong with its heart. Here a constitutional diathesis, stimulated by a bacillus, is followed by a result in the offspring quite different from the condition in the parent.

Toxins produced by bacterial disease in the parent may effect the offspring without inducing any special disease, but by weakening its constitution and power of resistance. Toxins produced, apart from bacterial disease, by a saturation of the parent with alcohol, opium, and the like, may affect the offspring both functionally and structurally, with the result that there are diseases and malformations.

It has been shown experimentally that toxins (hydrocyanic acid, nicotine, alcohol, etc.) may, directly injected into the eggs of fowls, affect the development so that malformation results. It is stated that the effects of lead-poisoning on the offspring may be wholly due to the father. Therefore, it seems legitimate to infer that toxins produced in the body may have a direct effect upon the germinal material. It is not shown, however, that the effect on the offspring is the same as that induced in the parent—which is the biological point under discussion—

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and it is a wild hypothesis that an ordinary modification liberates anything comparable to a toxin.

Alcoholism—Habitual drunkenness in a parent or in the parents produces familiar modifications, and may be followed by dire results in the offspring. But before drawing the hasty conclusion that definite structural results of alcoholic poisoning on the parent's body are in the strict sense transmitted to the offspring, we do well to consider: (1) that the intemperate habits of the parent may be the expression of an inherited psychopathic disposition, and it is this which is transmitted to the offspring; (2) that the saturation of the body with alcohol may have a direct effect on the nutrition and develop mental vigour of the germ-cells; (3) that the children of drunkards often become accustomed to alcohol as part of their food, from the days of suckling onwards.

Nervous Diseases—Prof. Binswanger of Jena, a famous student of psychiatry, has expressed his inability to find evidence that a mental or nervous disease acquired during the individual life is, as such, or in partial expression, inherited by the offspring. There are, he of course allows, numerous cases in which an inheritance of mental or nervous disease can be traced from one generation to another, but his difficulty was to find a case where it could be securely maintained that the first occurrence of the disease was due to external influence. It may, of course, be urged, though it seems an untenable extreme, that mental and nervous diseases never have an exogenous origin, but are always referable to germinal defect. If so, it simply forces us to say that this line of argument is closed as far as the question of transmissibility of modification is concerned.

What is Disease?—The distinction between health and disease is relative to an ideal—the maximum efficiency and well-being of the organism under given conditions; and pathology, the science of deranged function or disturbed in comparison with what we call “normal”—is, strictly speaking, part of physiology, the science of all vital activity. What we call “normal” in one animal—that is, a bird's mode of excretion, is called “diseased” in another; what is normal at one period of life—that is, the breaking down of tissue in a chrysalid, may be a disease at another period; what is normal in one part of the body—that is, proliferation of cells, may be a morbid growth in another region. Disease is a relative concept and does not admit of strict definition.

Our point here is indeed a familiar one, for the tritest of quotations remind us of the kinship between genius and madness, or of the resemblance between the lunatic, the lover, and the poet. As a matter of fact, Ziegler remarks, genius, talent, and mental derangement do sometimes occur in one family. The useful glutinous threads of mucus with which the male stickleback fastens together his nest of seaweed are remarkable renal secretions which, if we did not know their utility, would almost certainly be regarded as the symptoms of a kidney disease. Whether we take the changes in the adult salmon when fasting in freshwater, or the dissolution of the blowfly's maggot as it passes into the pupa state, or the condition of the tadpole as it looses its tail and becomes a miniature frog, or the necrosis at the base of a stag's antlers before they fall off, we have to deal with processes which, though now normal occurrences in the cases cited, would in other cases spell disease.

A great authority puts the point tersely: “Disease is a state of a living organism, a balance of function more unstable than that which we call ‘health;’ its causes may be imported, or the system may ‘rock’ from some implicit defect, but the disease itself is a perturbation which contains no elements essentially different from those of health, but elements presented in a different and less useful order.” (T. Clifford Allbutt, *System of Medicine*, 1896, vol. I. p. XXXII).

Optimism of Pathology—It does not seem possible to find any criterion which will serve in all cases to differentiate a new variation making for increased efficiency from another which makes for disease. Experience lends security to the judgment of the physician or the breeder in a large number of cases, but it is probable, as

Virchow has maintained, that some new beginnings which are now looking backward, regarded as normal steps in progressive evolution, would at the outset have been claimed by the pathologist as hints of fresh disease. Leaving microbic and acquired diseases out of account, we may safely say that various processes of hypertrophy and atrophy which are associated with disease in a well-finished organism like man are, as it were, recrudescences of important steps in past evolution. The persistence of germinal activity in a patch of cells may give rise to a tumor, but is it not, as it were, an echo of the power that lower animals have of regenerating lost parts? So it may be that some of the cerebral variations which we call for convenience "nervous diseases" are attempts at progress.

Diseases Due to Innate Predispositions and to Acquired Modifications—From the biologist's point of view diseases are of two sorts: (1) they are abnormal or deranged processes, which have their roots in germinal peculiarities or defects (variations, to start with), which express themselves in the body to a greater or less degree according to the conditions of nurture; or (2) they are abnormal or deranged processes which have been directly induced in the body by acquired modifications—*i. e.*, as the results of unnatural surroundings or habits, including the intrusion of parasites. Often, moreover, an inborn predisposition to some deranged function may be exaggerated by extrinsic stimuli, as when a phthisical tendency is aggravated by the intrusion and multiplication of the tubercle bacillus. That is to say, deranged processes which are primarily due to germinal variation often afford opportunity for equally serious disturbances which must be referred to exogenous modifications. A rheumatic tendency may be fatally aggravated by inappropriate nutrition.

Disease More Frequent in Man Than in Animals—Diseases occur among wild animals, but, so far as we can judge, they are very rare. They are certainly rare when compared with the frequent diseases of mankind. Why is this? One reason, probably, is that natural selection has a grip on wild life that man has refused to allow it to have over him. Elimination is keener and the wild race is healthier. Animals born diseased are killed off before they can reproduce. To parasites they adjust themselves, or become immune. Another reason is that wild animals live "more natural" lives, and that the stimuli provoking disease are therefore fewer. A third reason, perhaps, is that man is relatively younger than most wild races, and, therefore, with more idiosyncrasies. Fourthly, it seems that where epidemics occur among wild animals, they are almost invariably due to human interference. (See Ray Lankester's *Kingdom of Man*, 1907, p. 32).

It should also be recognized that man has created around himself a social heritage which often evolves quickly, hurrying and pressing its creator, who cannot always keep pace with it. This is a frequent condition of mental disorder. More generally, we may venture to say that many human diseases, especially of a nervous sort, seem in part due to the fact that the germ-plasm is not varying quickly enough to keep pace with the changes in environment—physical, biological, psychical, and social. We try to adjust ourselves to these by a panoply of modifications, and this business of adjustment is a strain that provokes disease. Apart from practical interests, it will be seen that, though the available facts in regard to disease do not lead us to any novel considerations which are not illustrated in normal cases, they throw some useful sidelights on the general problems of heredity.

Misunderstandings in Regard to the "Inheritance" of Disease—As with the transmissibility of acquired characters, so with the transmissibility of the ills our flesh is heir to, we have to face a number of current misunderstandings, which in many cases obscure the real facts. The long series of transmissible diseased conditions which Prosper Lucas, for instance, gave in 1847, will not pass muster today. It includes many cases which are outside the rubric of inheritance altogether. A more critical study, particularly of recent years, has led physicians

as well as biologists to define a number of distinctions between real and apparent inheritance. Thus, to take a simple instance, it seems a confusion of thought to speak of the inheritance of any microbial disease.

Reappearance Not Equivalent to Inheritance—The reappearance of a diseased condition in successive generations does not prove that it has been transmitted, or even that it is transmissible. The Alpine plants which Nageli brought to the botanical garden at Munich were much modified in their new environment, and their descendants were similarly modified. The usual characters reappeared generation after generation, but experiment showed that the reappearance was not due to inheritance, but was due to the re-impression of similar modifications on each successive crop. So it is with many diseased states which re-appear generation after generation, not because they have been transmitted, but because of the persistence of the unhealthy stimuli in function or in environment which originally evoked them. Collier's lung is a modificational result; it re-appears in generations of Collier's but there is no warrant for regarding it as heritable.

Pre-natal Infection Is Not Inheritance—Even when a child is born with symptoms or definite expressions of a disease which one or both of its parents exhibited, it does not follow that the disease was part of the inheritance. If the disease is microbial, it is never in the strict sense inherited. It may be acquired by infection through the mother during the foetal period. This may be illustrated by the rather rare occurrence of congenital tuberculosis and by some cases of congenital syphilis. No one who thinks clearly can maintain that these diseases are in the strict sense heritable.

The unborn offspring may be directly inoculated in utero with the germs of certain contagious diseases affecting the mother, and this in spite of the fact that the placenta is a wonderfully perfect filter. "Diseases of the contagious type seem to differ in the facility with which they are transmitted by this means. Thus, in the case of anthrax and tuberculosis, the infection of the foetus through the mother occurs only very rarely, while we know that in that of syphilis the liability is extreme." (Hamilton 1900, p. 290.)

It is said that a foetus in utero may take small-pox from the mother; but this is contagion, not inheritance. Syphilitic symptoms may appear in the newborn—microbes from the father or from the mother have passed into the child; but this is contagion, not inheritance. Some say this is an academic distinction without a difference, but to fail to make a distinction means confusion of thought.

Inheritance of a Predisposition to a Disease Is Not Inheritance of the Disease—In many cases it seems possible and useful to draw a distinction between the inheritance of a definite disease and the inheritance of a constitutional predisposition towards it. Thus, since tuberculosis is a bacterial disease, since relatively few children are born tuberculous, and since the disease attacks very unequally those who are equally exposed to the same external conditions of infection, it seems probable that what is really inherited is a constitutional peculiarity (arising originally as a germinal variation), which expresses itself, for instance, in "vulnerability of the protective epithelia," in fact, in a deteriorated power of resistance to the tubercle bacillus.

Acquired and Innate Abnormal Conditions Should Be Distinguished—Closely similar abnormal states of the body may arise in two different ways, and their heritability will differ with the mode of origin. If the abnormal condition is inborn in the strict sense—*i. e.*, if it is the expression of a constitutional peculiarity arising originally as a germinal variation—the probability of transmission is often great. But if the abnormal condition has been induced adventitiously by external influences (including food, drink, poisons, etc.), then the probability of transmission is slight. The distinction is a real one, but it is not always readily drawn in actual practice.

The position we venture to maintain is expressed in the following sentences; "As inherited (on the part of the offspring) or transmitted (on the part of the

parents), biology includes only those characters or their physical bases which were contained in the germ-plasm of the parental sex cells." (Martius, 1905, p. 11). Similarly, Virchow says: "What operates on the germ after the fusion of the sex-nuclei, modifying the embryo, or even inducing an actual deviation in the development, cannot be spoken of as inherited. It belongs to the category of early acquired deviations, which are therefore frequently congenital." This pronouncement is the more remarkable since Virchow believed in the inheritance of acquired characters.

Is the Distinction Between Innate Disease and Acquired Disease Practicable?—It is true that the distinction between an innate predisposition to a disease and an acquired disease "looks better on paper than by the bedside." This is simply an instance of what we continually find, that the "abstract" theoretical concepts of science are not always readily applicable to the intricacies and subtleties of nature. And yet the distinction is quite legitimate and thoroughly sound and useful in the present state of our knowledge. We cannot object to the utility of abstracting an "organism" from its "environment," although we know that a living creature is inseparable from surroundings of some sort; and we must not object to the distinction between innate (or idiopathic) diseases and acquired diseases because we know that the innate disease must have an evocative environmental stimulus, and that an acquired disease necessarily involves some organismal susceptibility.

What, then, is the distinction? It is the old distinction between a variation and a modification. An innate disease presupposes some germinal variation to start with, some germinal peculiarity to continue with. It is there, whether it finds expressions or not. If it does not find any appropriate nurture, it will not express itself in development, but neither will the normal process of thinking find expression without the appropriate liberating stimuli. If an indispensable process, the structural rudiment of which is a component part of the normal inheritance, finds no nurture, the organism of course dies. If a dispensable process, such as an innate disease the structural rudiment of which is also part of the inheritance, finds no nurture, the organism may of course survive if otherwise normal, but the rudiment of the disease may simply lie latent, and may be expressed in the next generation. Eventually, whether it finds expression or not, it may die away altogether just as useful variations seem sometimes to disappear. This might be called the racial cure of disease. An acquired disease is exogenous, not endogenous, in origin. It arises apart from any particular innate predisposition, as the direct result of inappropriate nurture (in the widest sense); of unnatural function, overfunction, or lack of function; and of intruding parasites—*e. g.*, bacteria.

But there are two complications. (1) An acquired disease may operate in an organism which has an innate bias to disease—*e. g.*, when a tubercle bacillus infects a phthisical constitution. (2) A diseased condition may be the result of premature or local arrests of development, or of excess of development, or of disturbance of the time-relation of the developing organism: and this may be due (a) to an intrinsic weakness or disproportion in some components of the complex mosaic of inheritance, in which case it is likely to be transmitted; or (b) to some disturbance of the nutritive and other conditions during ante-natal life, in which case it is not likely to be transmitted. To sum up in the words of a well-known pathologist, "the term 'acquired' should be applied only to what arises in the individual life-time—from the period of development onwards, under the influence of external conditions; and never to what arises, as we say, spontaneously—that is from rudiments already present in the germ." (Ernst Ziegler, 1886, p. 13).

Are Acquired Diseases Transmissible? It seems certain that diseased conditions may arise from germinal variations appropriately stimulated, as in rheumatism, obesity, and insanity; it seems equally certain that diseased conditions may be induced from without by peculiarities of function and environment, including,

of course, food and drink. Without there being any observable hereditary predisposition, a man may acquire cirrhosis of the liver, neurasthenia, cardiac hypertrophy, and so on through a long list. That a man may be invaded by microbes without being in any way peculiarly susceptible to them, or that he may be poisoned in a score of ways without there being any constitutional weakness to blame, seems certain. But are such acquired diseases in any sense transmissible? It seems to us that the answer should be in the negative.

No one can suppose that microbial diseases acquired by the parent can be transmitted to the offspring, though there may be ante-natal infection, and though the offspring may be prejudiced by the fact that the parents had the disease. If the maternal constitution is seriously affected, it is probable enough that the child may be born weakly, or imperfectly developed, or even poisoned. In other words, the embryo is disadvantageously modified by deficient or abnormal ante-natal nurture. If the parental constitution is seriously affected it is possible that the germ-cells may be likewise affected. This is most likely in the case of the ova with their relatively larger cytoplasm or formative cell-substance. In other words, there may be a transmission of secondary effects of microbial disease. The same will apply to any case where it can be definitely said that a parental body is saturated with poisons or toxins. But to admit this is very different from admitting that a specific modification of the parent's body can be transmitted to the offspring. Yet some who should know better persist in calling this "a distinction without a difference."

All disease germs with the exception of the tubercle bacillus but follow the life cycle of cells, multiply by fission or division for a certain length of time, then as this process weakens a dormant state supervenes. Next we have repeated just what the original cell does, reproduction by conjugation a rejuvenated period and when the full power of the cell is thus regained, reproduction again by division. This process seems to explain just how recovery of disease takes place either spontaneous or by the action of remedial agents. For instance, when the cells are in the height of their reproductive power the agent employed then does not seem to have much of an appreciative action in their subjugation but if repeated again and again brings about the condition in which the disease cell cannot reproduce itself by simple division therefore the disease for the time being is held at least in abeyance. If the remedy employed was well selected, perhaps the power of reproduction is entirely destroyed and the leucocytes of the body finish the program by digesting the dormant or dead cells.

On the other hand, if the remedy is employed just at the time when the propagation by division is at its lowest ebb or has entirely ceased then very little of the remedy comparatively speaking brings about a cure. So called spontaneous ending or curing of disease takes place when the reproducing process of the disease cells ends and cannot be rejuvenated by conjugation. Thus, Salvarsan acts upon the parasites of lues, as has been explained, it passes over the normal healthy cells of the body and by its selective action attacks the spirochetes only. Sometimes one dose causes their disappearance for awhile and a bit later they reappear. What becomes of them in the meantime? Simply repeating their law of heredity, having been attacked by a formidable enemy, they cease reproducing. Those left dwindle in size so they cannot be seen by the now known means for their detection. If allowed to rest for awhile they become rejuvenated, reproduce, grow in size and are again discoverable.

The best known, perhaps, of the pathogenic bacteria is the bacillus tuberculosis. This bacillus, as you know, under certain circumstances exhibits true branching. This shows that it is a higher form of life than ordinary bacteria and that it is allied to those fungi called streptothrices. We have had descriptions of the disease it causes for at least four thousand years. The life period of a tubercle bacillus is only from twenty to thirty minutes. Counting only the aged bacilli (one-half hour old), this agent has passed through 7,420,000 generations

without once changing its character. It has always and does yet breed true to form. Other diseases, as for example, variola, lues, etc., have from various causes become attenuated in form and in severity and have practically lost their fatality and on the whole are very amenable to treatment. Not so with tuberculosis; it is just as severe and just as resistant to treatment today as was the original case. Apparently this is one germ that has not been influenced by environment nor by the different ages of civilization through which it has passed and garnered its victims.

Another example is found in plant life. The first of all plants, those which flourished during the earliest geologic period were flowerless; by developing leaves and stems they became ferns—living and growing in the sea, out of which all life proceeded. They increased both in size and number to reach their zenith in the carboniferous period, when the world was either ocean or fern forest, there were no grazing animals or men, the splendid vegetation was useless for the support of mammalian life. Anything in the nature of the fern was never edible, it was of no use to the animals, so it came first. There was a wonderful method in this work of creation. Neither sheep or cattle, nor even man himself, could have existed in those magnificent strongly smelling forests of the coal age. The ferns merely succumbed because it was necessary so that room might be made for man and the beasts he fed on, so that there might be ground where the grasses and the flora and the corn bearing plants necessary for the new development of life might grow and flourish. Blind chance would not have introduced into the world sheep and goats together with the plants they fed on, would not on the eve of man's arrival to the form he now bears have stocked the forest with those things necessary for his existence. Things which had no place during the long reign of the ferns, fruits from the apple to the blackberry, flowers from the rose to the daisy. One order to be of use, the other a pleasure; would not have removed the giant ferns which were symbols of starvation and even now the brackens and other ferns which grown high in the woods, or cover the slopes of the hills and look so green and succulent making a pretty picture for the eye, remain as they were before man came driving his goats along. They cannot supply the smallest need of man, beast or insect. They rise in the spring, grow into forms of beauty, turn yellow and die down, year after year, age after age, untouched, uneaten and not a single creature has ever lived upon them. The ferns have always been ornaments forming the richest and grandest vegetation that the world has ever known, although man has never looked upon them in their perfection and they have only justified their existence by their departure from it and have died so that they might make coal with their remains. Those growths which were tossed by the currents of that first warm sea and felt at low tide the pressure of those first soothing mists, ever a covering to the rocks—preparations for the great drama, were going on, the stage was being set in order, scenery was being made and they perform that function still, covering and beautifying, lying like a mantle upon moorland and wastes, waving in the depth of the wood, struggling from the crevice in the rock, clinging to the decayed timber, hanging over the waterfall and finding their perfection of growth in the bog, because they love the moisture, remember it and how they were produced by the sea at the beginning of time. Not useless, therefore but beautiful; not a necessity, but a luxury; not forgotten, for everyone loves the flowerless plant, which was the first thing seen when the mists cleared. They are sold from door to door; they will grow anywhere, being so used to the world; the maidenhair which springs from the wet cliff finds its way into the bridal bouquet, the tree of the same name flourishes under water. The polypodies wither in dry weather, they cannot get away from the memory of the primeval sea and they seem to long for its wash again. They go into the weather which means sadness softening that, as they soften the rocks, the ferns have their place. The world would be less green without them. The ferns were allowed to survive, not because of their beauty alone, for if fossils do not lie the finer forms were lost; one-half of that dense vegetation which made the world a mass of green stuff was composed of

ferns and of these but a few remain, to remind man that ferns were the first living things, that they existed alone when the horror of that great mystery, chaos, brooded; that they met the spirit of life passing over the face of the waters, hiding from the fierce sun then and trembling at the convulsion which broke off a continent to form the moon. Seeing the wonders of the universe, lighten one by one to convince him that there was a time when the earth did not bring forth grass nor fruit tree nor pot-herb, but only those things which were pleasant to the eye. To show him that the beginning and present are linked together by many a form of life, that the darkness and light are both alike, and the darkness may return again and life return one mystery, the present another mystery, the future another, and his own life the greatest mystery of all, and of the mysteries of space which beat upon life as they beat upon chaos altering him, bending him, drifting him, here and there guiding him by what is called coincidence and, if he is worth it, leading him into some fair haven at last.

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Discussion

Dr. Buxton, Oklahoma City: Mr. Chairman, I came in specially to hear Dr. Heitzman's paper, and I was not disappointed, as the subject has been ably presented.

This is a topic that has interested me very much for a number of years. I am sure the medical profession in general have but a hazy conception of the laws governing heredity and the part heredity plays in the so-called transmission of diseases. If we all could master a few basic principles, we would eliminate a great many foolish ideas held by ourselves and the laity about heredity and the effect of maternal impressions on the infant.

As a matter of fact the human vitalized ovum—the oosperm—contains all the elements to make a mature man, (not a man in miniature) but the determiners that eventually do make him what he becomes. We know that the children resemble the father just as much as the mother. From each equally they derive their being, spiritually, mentally and physically. As an illustration, the Hebrew race have peculiar characteristics, (as do all other races) and have maintained its own peculiarities, both mental and physical, throughout the centuries and will do so as long as the race does not mix.

Again the same principle is seen in resistance to disease. We know that the Eskimos are carried away by the thousands by measles. This disease among others is a simple affair with small mortality. It is the inherited resistance or non-resistance that makes it simple or severe. Environments may suppress or bring into full force in the individual certain mental and physical characteristics, but environments produce but little change in a species or race. The blacksmith develops a mighty arm, but his little boy has no better developed arm at birth than did his father at the same age. For example, the life cell that was to determine the son was stamped and made before the father ever became a blacksmith.

We know cataract is transmitted. The determiner in the germ cell makes the cataract in the next generation. One may have cataract twenty years after a child is born, yet at a like age the determiner in the oosperm causes cataract in the child. The same determiners in the chromosomes that made the father have cataract exist in the germ cells of the child. In Oklahoma we have a case of dislocation of the lenses in five children of one father and mother. The father has dislocation of the lenses of both eyes. It is not a disease, it is a malformation. It is because the father's germ cell and the children's came from the same source.

This subject is of wonderful interest and we are as yet only in morning shadows,

but constantly the sun is ascending upon our investigations and soon our labors may be crowned by a glorious sunrise which will drive away the oblivion of darkness and cause to flee the teachings of the old crones who have had complete sway for so many centuries in the garden of heredity.

Dr. West: It is an intensely interesting paper. The poetry at the latter end is good literature, I doubt whether it is good science. The question of heredity and hereditary disease has been discussed from time immemorial and has a vast interest. It is all well enough to say that diseases are hereditary merely because they appear in families, and have a distinction without a difference. Let me illustrate my meaning; the question of the hereditary characteristics of tuberculosis. Life Insurance companies have always wanted a family history so they can prognosticate what the characteristics are in this particular case. In later years there has been a tendency among physicians to minify their estimate as to the value of the hereditary characteristics of tuberculosis. In other words, they maintain it is not a hereditary disease. It is quite certain that the tubercle bacilli are not transmitted in utero to the children. The children are not born with tuberculosis. In plant life, for instance, let's see what happens. Take wheat; there are certain kinds of wheat that are rust proof. For a long time they have tried to get productive wheat that is rust proof. At the present time we have not been able to get a highly productive wheat that is rust proof. Merely that this wheat does not produce.

Exactly the same thing occurs in the lower animal families; take goats for instance, they cannot have tuberculosis. They are immune. They resist it. In individual families we have the same thing to reckon with. There are families in which there is low resisting power and that power is transmitted. It may be where the parties are crosses, one who has an extremely high power of resistance and the other very low. A child only takes some of these characteristics, so it must be reckoned as a fact beyond question that a history of tuberculosis in a family is still to a degree questionable so far as its resistant power against that disease is concerned. The same thing will apply to every other disease, and to assume that infection is all that is involved seems to be a mistake. It is the resistant power. Therefore, a child which is predisposed from the beginning is peculiarly predisposed with added danger, but to assume that because the child does not come in contact with it it is safe from the hereditary tuberculosis is false.

Dr. Heitzman: If one will pay especial attention to the questions involved in heredity and study them under the two heads that have been given to us by the authorities on this subject, we will find that practically all the abnormalities in man behave as dominants; it is perhaps surprising that we have no quite positive cases of pathological conditions behaving as recessive in man. Naturally, as evidence of direct transmission is not to be expected, the likeliest place to look for recessives will be among those conditions which have been noticed as coming with especial frequency in families resulting from consanguineous mating. The three conditions that are usually ascribed to recessive characteristics are albinism, alkaptonuria and retinitis pigmentosa. It need scarcely be remarked that when a disease such as tuberculosis, which is due to a pathogenic organism, affects certain families or strains with special frequency, the hereditary or transmitted property is either the presence of something which renders the organism specially liable or the absence of something which confers a higher degree of resistance. From the nature of the case, pedigrees are not of much service in the analysis of these examples, for it cannot be asserted that an individual who escapes, underwent the same risks of infection as those who took the disease. The question of tuberculosis has interested man as far back as history runneth. The great sanitarian Moses knew that it was transmitted to man, else why did he institute the inspection laws in regard to food? It was ordained by him that the chest cavities of all animals that were allowed the Jewish people for food should be thoroughly inspected. He realized that there was something about this disease that was contagious. The

few cases that are on record where the new born foetus has been found to contain the tubercle bacillus is not an argument for the heredity of the disease, it simply means that child had been infected through the mother. It is infection, not heredity.

NEPHRECTOMY DURING PREGNANCY

Case Report

FRED Y. CRONK, M. D., F. A. C. S., Guthrie, Okla.

One often fails to realize the importance of reporting certain procedures, successful and unsuccessful, for consideration of those to whom similar conditions present themselves. The collection of the case reports under the heading "Nephrectomy During Pregnancy" by Dr. Schmidt of Chicago in December, 1915, issue, *Surgery, Gynecology and Obstetrics*, suggests fewer patients coming under this class than one might expect. The small number of reported cases prompt me to add one more to the list.

Patient in question, Mrs. L. S., age 27, entered the hospital in March, 1915, complaining of pain in right flank.

P. H. Healthy as a child. Typhoid fever nine years ago. Has had two children, youngest 13 months old. No fever during or following the pregnancies. Patient is now pregnant four months.

P. I. Ten days ago patient experienced an acute sudden pain in the right flank just under lower border of the ribs. Controlled by morphine. Had considerable fever ranging from 99 to 105 degrees. Urine was dark red and cloudy at first; then become light color with heavy white sediment. This was the condition of the urine on entering the hospital.

Examination; strong, healthy looking woman. Good color. Blood pressure Syst. 120, Diast. 95. Heart sounds distinct. Lungs clear throughout. Abdomen full, not rigid. Tenderness and rigidity in the left upper quadrant, extending around to the costal margin in front. This mass is smooth, tender on pressure and suggests the lower pole on the right kidney. Temperature on admission 104 degrees. Temperature at noon (2 hours later) 101.4 degrees. Urine on standing shows sediment varying from 1-4 to 1-2 the volume composed of pus cells. The following morning, temperature was about one degree above normal. Pulse 90. Mass considerably smaller, less tender and patient fairly comfortable. Conditions were favorable and operation advised.

Operation; large right kidney, 2 1-2 by 3 by 6 1-2 inches, firm and very adherent. Nephrectomy was done and wound closed with small tube drainage.

Pathological report; kidney measured 14 by 7 by 5 1-2 cm. Surface is smooth, though ragged, showing adhesions of a thickened capsule to surrounding tissue. Ureter (2 cm.) attached. This is thin walled and large lumen. On cut section, longitudinally the pelvis is large (signs of distension) and two pockets, only slightly roughened, containing about 1 c. c. each of pus and a few shreds of necrotic material (strings of pus cells). The cortex is red and swollen. Most of the kidney enlargement is due to the swollen kidney substance.

Diagnosis—Pyonephrosis.

Patient made an uneventful recovery, leaving the hospital in 18 days following operation.

July, 1915, the patient returned to the hospital, giving a history that for the past week she had experienced pain in the left side of the abdomen and that her doctor had reported considerable pus and albumin present in the urine, and advised immediate emptying of uterine cavity. Repeated examinations in the hospital showed no albumin or pus in the urine and after five days rest, patient returned to her home. Two months later gave birth to a healthy, strong child. She writes that she is in excellent health at this time.

POST OPERATIVE SUGGESTIONS

Following operative work for abdominal conditions, especially appendiceal and gall bladder work, distension is often a troublesome feature. A number of drugs are recommended both hypodermatically and by the bowel. Turpentine stupes to the abdomen are also frequently employed.

In my hands nothing has been so resultful as the hypodermic injection of eserine grs. 1-50 and Strychnia grs. 1-60, with passage of a rectal tube to remain in place for a half to three quarters of an hour. This hypodermic may be repeated in one hour and again in two hours if there is considerable distension and you do not get the desired result from the first and second injections. Our method is to use this hypodermic every six hours in patients where we expect uncomfortable conditions, beginning as soon as the nausea ceases, following an anesthetic, and continuing until the administration of a cathartic. It may be continued with benefit for five or six days until the abdomen is quite free from distension.

This drug is inexpensive as compared with many others similarly used, and is certainly as gratifying in its effect. This combination is very safe when used in the dosage above named.—F. Y. C.

Every case of carcinoma of the uterus should have a cystoscopic examination of the bladder to determine the involvement that may or may not exist.

—J. B. Percy.

Retention of urine in the adult male without any apparent cause is a pathognomonic sign of tubercular meningitis.—Keller Moody.

CALCIUM CHLORID IN TREATMENT OF HAY-FEVER

R. Emmerich and O. Loew (Abstr. Jnl. A. M. A. page 781, Feb. 27, 1915) report that the use of this drug is based on its physiological effect and is rational, that patients cured by it in 1913 had no return in 1914, others had the disease almost attenuated, almost a cure and in the next season was followed by a like attenuation. They have always impressed on their patients that fruits and vegetables are of much greater moment for the mineral supply than meat or starchy foods or bread * * * * *. The formula calls for 100 gm. crystallized calcium chlorid in half a liter of distilled water. Three teaspoonfuls of this are taken during the day, always with meals. This dosage is no more than one gets in a pint of milk and seems to be entirely harmless. Loew has taken this dose daily six or seven years without harm. Jacobi and Wolff-Eisner experimented with calcium salts to learn their action on the kidneys, but their experiments with very large amounts and on diseased kidneys have no bearing on the therapeutic use of the above small doses of calcium chlorid. Jacobi emphasizes this in particular, saying he has witnessed very brilliant results from the latter. Wolff-Eisner remarks that the calcium probably has an inhibiting action only on morbid kidneys, as he could find no influence of the kind on his two cases of sound kidneys.

(Clinically, this observation was confirmed in several cases treated in the summer of 1915, all of which were benefited, some to very marked degree. Two of the cases have not yet had any return, no report from the others.)—Ed.



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Failure to receive the Journal should call for immediate notification of the editor, 507 Barnes Building, Muskogee, Okla.

Local news of possible interest to the medical profession, notes on removals, changes in address, deaths and weddings will be gratefully received.

Advertising of articles, drugs or compounds not approved by the Council on Pharmacy of the A. M. A. will not be accepted.

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EDITORIAL

THE CONTROL OF SUSPECTED TUBERCULOSIS

Detroit's Health Department is operating a system along very efficient lines, worthy of study by many Oklahoma cities. An outline of the plan, producing excellent results, is summarized in the following steps well illustrated in the scientific exhibits at the recent A. M. A. meeting. The plan contemplates a trained visiting nurse who, at the direction of the department, calls and makes an inspection of the persons and premises in question. The suspect is referred by the nurse to the diagnostician of the department, who settles the matter and if necessary places the patient under proper treatment, giving him every advantage of skilled treatment with all that implies. The focus of infection is not left undisturbed with these steps, but is followed up by proper advice and suggestions to those in the home who have not yet but may soon develop the infection. The great value of proper ventilation, regular and proper habits and dietary, is accentuated to the family by teaching and example.

Our difficulty lies in the fact that none of our municipalities are financially able or, as a rule, well informed as to what steps should be taken to limit the infection where it is already proved to exist or to properly impress on those liable by contact to infection the measures necessary for prevention. Of all our infectious processes, none demand such intelligent procedure for prevention. The disease often readily responds to treatment *before it exists*, less so in incipency, and is extremely liable to unsuccessful handling after the process is established in the active stage—this is well illustrated in the history of those families favored by financial ability, intelligence and a willingness to co-operate toward prevention, in the fact that the disease is either wholly held in abeyance or arrested if developed.

The prevention and control of tuberculosis should be considered one of the important functions of state government, for its ravages strike the foundations of society more than any other infection. The citizen stricken, at once becomes personally helpless as to his individual productivity and happiness, immediately a menace to his family and associates, who when infected increase the scope of danger.

We may never reach the desired perfection we wish to attain, but this should not prevent us in striving to place before our authorities and prospective victims the measures of prevention. The disease will certainly go on in its destructive course, but the aggregate number may be lessened with a consequent decrease in centers of infection.

WINE OF CARDUI WANTED \$100,000.00, THEY GET ONE CENT AT JURY'S HANDS

After being out six days considering the evidence presented during many weeks of a trial in the Federal Court in Chicago, the jury in the case of the Chattanooga Medicine Company against the American Medical Association and Dr. Geo. H. Simmons, Editor of the Journal, gave the Plaintiffs a verdict of one cent. The proceedings in this case have been closely followed by many physicians since the beginning, the Journal A. M. A., publishing a part of the proceedings each week.

No official statement up to the time we go to press has been made by the Association as to what steps will be taken in the matter.

While the verdict is a victory for the Association from a monetary standpoint and from an exemplary view as well, it is not what the profession had hoped for and on that account if there are any circumstances warranting such steps an appeal should, and probably will, be taken to the higher courts. There was introduced to the jury what would seem to a physician a mass of irrefutable evidence showing that Wine of Cardui had been used to such an extent by both men and women that intoxication had resulted and that it was bought and used as a beverage rather than as a medicine. Many of the best known gynecologists and obstetricians as well as chemists and pharmacologists of the country testified that the ingredients of a hypothetical compound similar to wine of Cardui, aside from the alcohol contained, could have no effect on the conditions for which the wine was recommended by its purveyors. On the contrary it was shown that certain conditions would grow worse while under its use, if for no other reason than that the patient would be lulled by a false sense of security while the process continued its ravages to the point where no system of treatment could be of benefit.

The brunt of this fight has fallen on the Editor, Dr. Geo. H. Simmons, and he is to be congratulated by every right thinking physician in the country for his pioneer stand in opposition to the once greatly prevalent, but now rapidly disappearing evil of self drugging, never of benefit to the patient, often of fatal consequences to her as was testified to this jury. Notwithstanding this showing, and probably on a technicality, the jury awarded the munificent sum of one cent as a balm to the alleged injuries suffered.

A STANDARD HEALTH INSURANCE ACT

Dr. Alexander Lambert, chairman of the social insurance committee of the A. M. A., submitted a report of that committee at the Detroit meeting which may be read in full in the Journal of the A. M. A. for June 17th. The report covers 34 pages and is the most exhaustive ever observed on the subject of all phases of social insurance. The committee secured the services of Dr. I. M. Rubinow, an expert statistician and authority on such matters. The report considers the following facts and phases; that insurance has been long in force in Germany, Austria-Hungary, England, Norway and Russia, finally concluding that compulsory insurance is better than voluntary in that it reaches those who need it most rather than the thrifty worker who may care for himself. The various foreign manner of application is thoroughly considered; the administration and extent of benefits, remuneration of physicians, payment in particular cases, scope of treatment, hospital and individual treatment, among other things are noted.

The controversy between the British Medical Association and Government is considered. We suggest that every member of our Association carefully read the report submitted by this committee.

The present Workman's Compensation Law in Oklahoma is not what it should be from a physician's standpoint; does not give the doctor in every case the pay he should receive, but is a long step toward remedying situations which, in some instances, had become almost unbearable. In this connection, it is well known that an employee of a corporation receiving a very trivial injury, in nearly every case had the habit of demanding and receiving a sum in settlement far in excess of the justifiable amount due to the damages. It was also true that the employee rarely ever profited by the settlement, for the reason that as a rule one-half went to the disreputable attorney representing the man.

The Oklahoma law does not reach all the people it should reach. From the standpoint of citizenship, it is just as important to render proper care to a plowman, hay field worker, etc., as to a mill man or oil field worker, and if we are to judge the future by the past we may soon expect legislation providing for some form of universal insurance covering all people receiving a salary or wages up to a certain amount. The present Oklahoma law provides for accidents only. The employee is cared for if a flying timber crushes his skull, or if he is injured in any other manner incident to his employment, but it does not care for him if incidental to his employment he becomes sick from drinking infected water innocently furnished him by his employer. Falling timber may mash his foot and that is cared for, but an appendix that the life was mashed out by compression of swelling is not cared for.

All these things are very important to the medical profession of Oklahoma, for we are the foundation stone on which rests the systems of legislation, fraternal social or other insurance looking to the alleviation of illness among the insured. As humanitarians we should study the question and see that the most people possible derive benefits from whatever legislation may hereafter become effective. We can only do this by studying efforts, failures and successes of other people in other countries and states. We cannot propose to do things materially different from what has been done by other people and countries except experimentally, and from the mass of legislation throughout the world we should assist in evolving a sensible program in our own state.

DETROIT MEETING

The Detroit meeting of the A. M. A. was the largest in attendance ever held by the Association. This of course, due to the fact that it was held in a city surrounded by very populous country and convenient of access to thousands of physicians. There was considerable complaint on the wide scattering of the section meeting places. This complaint, however, may be said to hold at nearly every meeting, very few cities being able to hold them otherwise. The general impression is that the scientific sections were not as good as they have been at times in the past and the meeting was rather free from the marked advances brought out in some of the other meetings. The election of officers, resulted as follows: President, Chas. H. Mayo; vice presidents, 1st, L. F. Barker; 2nd, John Leeming, Chicago; 3rd, J. H. Carstens; secretary, Alex. R. Craig; treasurer, Wm. Allen Pusey. Trustees to fill vacancies were elected as follows: A. R. Mitchell, Lincoln, Nebr; E. J. McKnight, Hartford, Conn., and Oscar Dowling, New Orleans, La.

The House of Delegates created the office of President of the House and Hubert Work, Pueblo, Col., was elected President. New York City was selected as the meeting place for 1917.

PERSONAL AND GENERAL NEWS

Dr. G. O. Todd, Bismark, has moved to Kansas City, Mo.

Dr. A. H. Shi, Stratford, visited the Murphy Clinic in May.

Dr. W. H. Rutland, Altus, visited the Chicago clinics in May.

Dr. T. J. Horsley, Mangum, visited the Chicago clinics in June.

Dr. Amos Avery has been appointed City Physician of Sapulpa.

Dr. G. B. Van Sandt, Wewoka, is doing special work in Chicago.

Dr. U. C. Boone, Chickasha, visited the Chicago clinics in June.

Dr. J. L. Houseworth, Guthrie, was reported seriously ill in May.

Dr. Chas. T. Harris, Kiowa, had a fracture of the clavicle, May 5.

Dr. and Mrs. R. L. Mitchell, Vinita, announce the arrival of a son.

Dr. G. W. Jobe, Wagoner, is doing post-graduate work in Chicago.

Dr. E. L. Underwood, Crescent, is in the East doing post graduate work.

Dr. E. O. Barker, Guthrie, has been appointed city physician in that city.

Dr. J. R. Graves, Council Hill, took a vacation in May, visiting Arkansas.

Dr. J. J. Fraley, Hominy, is a candidate for the state senate from Osage county.

Dr. and Mrs. Fred J. Wilkiemyer, Muskogee, announce the birth of a son May 20.

Dr. R. W. Murray, for many years located at Welling, died June 6 after a long illness.

Dr. L. M. Overton, Fitzhugh, is a candidate for the legislature from Pontotoc county.

Dr. Winnie M. Sanger, Oklahoma City, is doing special work in New York and Baltimore.

Hobart's new City and County hospital was opened for the reception of patients June 21st.

Dr. Roscoe Walker, Pawhuska, and Miss Artie Lee, Gorsuch, were married in Denver, June 28.

Dr. C. V. Rice, Muskogee, attended the A. M. A. meeting and visited eastern points in June.

Dr. and Mrs. W. E. Seba, Leedy, will take an automobile trip to the Dakotas during the summer.

Dr. R. R. Hume, Minco, is doing postgraduate work in Chicago Polyclinic and Postgraduate School.

Dr. A. H. Bungardt, Cordell, visited the Rochester Clinics in June and also attended the Detroit meeting.

Dr. and Mrs. A. B. Leeds, Chickasha, are touring the Wichita Mountains, New Mexico and Colorado.

Dr. Melvin Fry, Drumwright, accompanied by Mrs. Fry, is touring Missouri and Ohio in his automobile.

Dr. A. C. Hirshfield, Oklahoma City, has received a commission as First Lieutenant, Medical Reserve Corps.

Dr. T. M. Aderhold, El Reno, attended the Washburn College alumni meeting and Chicago clinics in June.

Drs. Dunlap, Milne and Gooch, Lawton, have received commissions in the Medical Reserve Corps, U. S. Army.

Dr. E. L. Emanuel, Chickasha, health officer for Grady county, is doing special work in the New York Polyclinic.

Dr. Frank P. Davis, Enid, was elected President of the Oklahoma State Eclectic Association at the Tulsa meeting.

Dr. W. R. Kelly, Watonga, is a candidate for corporation commissioner, subject to the action of the Democratic primaries.

Dr. W. D. Phillips, Maud, received slight injuries when his automobile struck a stump. He was thrown through the windshield.

Dr. William S. Clark, Oklahoma City, has been placed under arrest for violating the Harrison law. It is charged he sold heroin illegally.

Dr. S. H. Landrum is doing special work in Tulane, New Orleans. He is serving an internship in the eye, ear, nose and throat departments.

Dr. J. T. Vick, formerly of Ft. Towson, but now of Oklahoma City, was recently placed under arrest charged with violation of the Harrison anti-narcotic law.

Dr. and Mrs. F. B. Fite, Muskogee, visited Vassar College and the University of Virginia Commencement exercises in June. At the latter their son will receive his diploma.

Dr. Leigh F. Watson, Oklahoma City, was awarded one of the prizes for original research work based on his scientific exhibit of the injection treatment for goiter at the Detroit meeting.

Dr. A. L. Blesh, Oklahoma City, was recently seriously hurt when a car driven by his son and one driven by Attorney General Freeling, collided. The accident occurred May 27. Dr. Blesh soon recovered.

Dr. L. H. Murdoch, Okeene, visited the Murphy Clinic, Chicago, Washington and New York City in June and wound up at Ithica, New York, to attend the commencement exercises of Cornell, where his son will graduate.

Dr. Holman Taylor, Secretary of the Texas State Medical Association, is now in command of a battalion of the Texas National Guard along the Rio Grande. Dr. Taylor has been a Major in the guard for several years.

Drs. R. L. Mitchell and A. W. Herron, Vinita, narrowly escaped injuries when they had to abandon their car on a railroad track. The car was damaged slightly, the doctors escaping by the quick demountable maneuver.

Dr. Hugh L. Scott, First Lieutenant, Medical Reserve Corps, writes from "In the field, Columbus New Mexico," that it is likely he will soon return to Oklahoma. Dr. Scott will have charge of the Regimental Headquarters Hospital of the First Oklahoma Infantry.

Dr. J. L. Lehew, Pawnee, had an accident from an unusual cause recently. Worn out with work he went to sleep while driving along a road, and when he awoke he found his car had jumped the bank and he had gone through the windshield. Two ribs were broken and the car badly smashed up.

Muskogee Academy of Medicine was recently organized with Dr. Chas. W. Heitzman, president, and Dr. J. Hutchings White, secretary-treasurer, Dr. P. P. Nesbitt, Dr. C. M. Fullenwider and Dr. C. A. Thompson, Board of Censors. The membership is limited to twelve active and twelve associate members.

COUNTY SOCIETIES

Haskell County program for June 5. "Amebic Dysentery," Dr. John Davis, Stigler; "Medical Legislation," B. T. McClure, McCurtain; "Smallpox," E. Johnson, Kinta; "Pneumonia," H. J. Sims Stigler.

The Adair County Medical Society met in Watts June 6th. The visiting physicians being entertained by Drs. Sands and Rogers. After the meeting, the physicians visited the Illinois river and spent the time fishing and bathing.

McIntosh County held a meeting June 6th. Dr. L. C. Kuyrkendall, McAlester, read a paper on "Focal Infections;" Dr. J. H. White, Muskogee, held a clinic, demonstrating a hemorrhoidal operation. The remainder of the meeting was taken up with case reports.

Marshall County held a successful meeting in May, at which time Dr. J. W. Duke, State Commissioner of Health, delivered an address on "Public Health and Preventive Medicine;" Dr. LeRoy Long delivered an address on "The Mutual Interest of the Layman and the Doctor."

Mayes County Medical Society met in Locust Grove, June 13, with the following announced program: "Diarrhea in Children," H. E. L. Pierce; "Adenoids," F. S. King; "Fractures," J. R. Preston; "Pneumonia in Children," J. L. Mitchell; "Malaris," J. D. Leonard; "Heart Lesions," J. E. Hillis.

Rogers County Medical Society met in Collinsville, June 26th, with the following program: President's Annual Address. Business Routine: Assignment of Committees, Etc. Peritonitis, G. A. Wall, Tulsa; X-ray Diagnosis, H. E. LaReau, Tulsa; Clinic, by Local Physicians, H. L. Callahan, Chairman, Collinsville; Blood Findings in Acute Infection Disease, H. L. Hammer, Tulsa; Ileocolitis, A. M. Arnold, Claremore; Clinic, by Local Physicians, E. Pleas, Chairman, Collinsville; Internal Medicine, Waller E. Wright, Tulsa; Treatment of Compound Fractures, W. W. Jackson, Vinita; Fee Bill vs. the Physicians Income, Walter A. Howard, Chelsea. Reception given by the Collinsville Physicians. Several applications for new membership were considered.

CORRESPONDENCE AND MISCELLANEOUS

A NOVEL PROPOSITION

For whose benefit do county and municipal authorities go to the trouble and expense of quarantining and fumigating against smallpox? Answer: For the protection of the unvaccinated. They only are in danger of infection. Why should there exist any unvaccinated person in any community when the simple procedure of vaccination is so inexpensive and is even done gratuitously by the powers that be when requested? Answer: Either because of pure carelessness or silly unbelief. What, then, is the duty of the vaccinated public? Dr. S. L. Jepson, of Wheeling, W. Va., Secretary of the State Board of Health, suggests that those who are opposed to vaccination should not be compelled to submit to it and neither should the vaccinated public be put to the expense of protecting them with quarantine and fumigation of infected houses. If they will not accept the certain protection by vaccination offered them by the authorities, he sees no reason why those authorities should take any further trouble on their account. They pretend to disbelieve in vaccination; let them test the matter to their own satis-

faction. "Placard infected houses and leave them open," says Dr. Jepson. "Then the disease will spread and those who now refuse to be vaccinated will soon come to terms." And, he might have added, none but the unvaccinated would be in the slightest danger of contracting the disease. As the logicians say, the point is well taken.

The principles involved in the above proposition were long since adopted in several meetings of Oklahoma Health Officers. It is generally understood that quarantine is almost useless in Oklahoma on account of the usual mildness of the infection and from the fact that the quarantine is not observed in good faith. No physician fears small-pox, why should his patients?—Ed.

DOES IT FIT YOU?

Our President, in a recent message to a committee of the Senate, used the following words to characterize one of his nominees. It represents so well the ideal of the modern doctor that we quote his paragraph verbatim:

"I cannot speak too highly of his impartial, impersonal, orderly and constructive mind, his rare analytical powers, his deep human sympathy, his profound acquaintance with the historical roots of our institutions and insight into their spirit, or of the many evidences he has given of being imbued to the very heart with our American ideals of justice and equality of opportunity; of his knowledge of modern economic conditions and of the way they bear upon the masses of the people, or of his genius in getting persons to unite in common and harmonious action and look with frank and kindly eye into each other's minds, who had before been heated antagonists."—Editorial *Lancet Clinic*.

SCANNING THE FIELD

According to the California State Journal of Medicine, April, 1916, more than 10 per cent. of the membership of the State society have been sued or threatened with suits for damages, and some of the worst suits have been against internists and obstetricians. Yet a county society has lately passed some rather strong resolutions against the State society's defense, and, notwithstanding heavy use of the defense, the members of the state and component societies do not seem to have an adequate conception of the nature of the aims of the state defense. However, the confusion suggests the competitive rattle of the inveighing tongues of eager insurance agents.

The California Council on Medical Defense supplies legal counsel for its members in case of suits against them for malpractice, pays court costs and other expenses of such cases, but will not pay judgments against members. It will also co-operate with the counsel of indemnity insurance companies with which such members may carry insurance, if needed, but insists that such companies bear the expenses of suits for members paying them to do so, reserving the right to help if their members should need additional legal support. Every member whose dues are paid to date of suit is entitled to defense. The provisions of the Council of Medical Defense of the Texas State Medical Association are identical with those of the California Association, and are satisfactory to Texans. Neither California nor Texas will defend the unworthy practice of unworthy members—*Texas Courier Record*.

IN MISSOURI

Published by Request of Health Department

DR. R. E. CASTELAW, Secretary,
Jackson County Medical Society,
Kansas City, Missouri.

Dear Doctor Castelaw: For your information and as warning to physicians I beg to advise that the Health Department considers it illegal for physicians to sign death certificates and seek burial permits in cases of persons dying in the hands of Christian Science Healers or Christian Science nurses. Recently there was issued from the Emergency Hospital a permit to bury a certain person who died while in the hands or care of a Christian Scientist. The physician who had been in charge immediately previous to the advent of the Scientist refused to sign the death certificate but one who had been in charge sometime before that, did sign such death certificate and no information is given to the Health Department about it. Such cases belong properly to the Coroner and should be reported direct to him and to the Health Department as well.

Physicians who lend themselves to Scientist to sign death certificates to get out of a hole encourage that system of practice in fatal cases. It is regrettable that such a thing should be possible.

Yours very truly,

PAUL PAQUIN,
Director and Executive Officer.

KENTUCKY FEE-SPLITTING LAW

Be it enacted by the General Assembly of the Commonwealth of Kentucky:

1. That hereafter any physician, surgeon, or other person who carries, sends or is in any manner

instrumental in causing a patient to go to another physician or surgeon for surgical operation or advice as to, or treatment of, any physical or mental disease, injury or ailment and receives therefor from such other physician or surgeon any money, gift or other thing of value for such patient, or who has any agreement or understanding with such physician or surgeon to receive therefor any money, gift or other thing of value whatsoever from such physician or surgeon, without the knowledge and consent of the patient, shall be guilty of selling the patient within the meaning of this Act.

2. That hereafter any physician or surgeon or other person who knowingly receives any patient so carried, sent, or caused to go to him for any surgical operation, or advice as to or treatment of, any physical or mental disease, injury, or ailment, and such physician or other person pays any money, gift, or other thing of value or promises any compensation whatsoever therefor, to such physician, surgeon or other person so sending or carrying such person to him, without the knowledge and consent of the patient, shall be guilty of buying the patient within the meaning of this Act.

3. That any person who buys or sells the patient within the meaning of this Act so defined in the next section hereof, shall be guilty of a misdemeanor, and, upon conviction, shall be fined for the first offense not less than \$50.00 nor more than \$100.00, and upon conviction of the second offense he shall forfeit his license to practice medicine and surgery in this Commonwealth. The Court so trying such case shall, upon conviction of the second offense, declare the license of such physician or surgeon to practice medicine or surgery in this Commonwealth cancelled, and such license so cancelled shall not be renewed in this Commonwealth.

Any acts or parts of acts in conflict with the provisions of this act are hereby repealed.

GOING TO COLORADO?

During the auto races to the top of Pikes Peak at Colorado Springs, Colo., August 11, 1916, the El Paso County Medical Society has arranged for a dollar dinner and other entertainment, at which time Dr. Burton W. Sippy of Chicago will deliver an address on "The Treatment of Peptic Ulcer, Past and Present." You are invited. If you can be present, notify Dr. E. L. Timmons, chairman of the entertainment committee, at Colorado Springs, Colo., so provision may be made for you.

THE BUSINESS OF DOCTORING

There's a vast difference between being a grasping, mercenary doctor, and that type that fully appreciates the "business" side of his calling, if you please. The Doctor who is afraid to collect his just dues should give a thought to his neighbor, the banker, whose very commercial existence centers around his ability to "get the money." The unfortunate who can't meet his honest debts is worthy of sympathy, but the man who can but don't or won't is not entitled to undue consideration. Understand your man, and his circumstances, then treat him accordingly. One of our advertisers this month, page (—) possesses the necessary skill to handle obstinate cases with great success. From evidence before us, we believe they can save you considerable time, work, worry and expense in doing your collecting for you.

FROM THE OKLAHOMA STATE BOARD OF HEALTH, GUTHRIE, OKLAHOMA, DR. JOHN W. DUKE, COMMISSIONER

Vacation Precautions

Summer has come to Oklahoma and with the advent of the real hot weather nearly everyone begins to think of vacation. Vacations are good, a complete change of environment once a year is stimulating and healthful for both mind and body. But it is well to remember that such a change means new conditions and, unless precautions are observed, new dangers to health.

Especially should these precautions be observed in regard to children. Children are more susceptible to disease than adults, they are more affected by change of environment, their resisting powers are less. The old maxim "an ounce of prevention is better than a pound of cure," applies more forcibly to health than to any other condition; it is especially true as regards children. The precautions to be observed are neither numerous nor difficult. They are founded on common sense and the simplest principles of hygiene. It is better to observe them than to let them go and perhaps later call in the doctor to make good the neglect. For sometimes not the physician, but the undertaker will be called in.

First and foremost of summer precautions should be care in regard to water. Too often persons preparing to go on a vacation will study with care the conditions obtaining in regard to scenery, temperature, society and expense yet never give a thought to the purity of the water supply. It is easy to ascertain whether the water at any particular summer resort is good or bad, whether the supply is liable to contamination or not. A large percentage of typhoid cases are due to impure water taken during vacation time. Sometimes the disease does not develop until after the return home. Then the city water supply is blamed, when the real fault was with the water used while away. Children are especially susceptible to illness due to contaminated water. It is impossible to be too careful in this respect. Next to water, care should be exercised in regard to the milk supply. As a general thing there is less danger from the milk at summer resorts than from the water, but it is well to make certain. Milk is one of the principal food elements of children, and one of the best when pure. No precaution to insure its purity should be considered "too much trouble."

Fruits are most welcome and most abundant in summer. It is the time of year when Nature intends we should eat them most freely. But it is well to remember that it is also the time of year when they are most apt to spoil. It is also the time when children are most liable to eat unripe, green fruit. Many of the cases of stomach trouble resulting from this cause may seem trivial, but there is always danger of complications or serious illness.

It is hardly necessary to say that the hot weather is above all the time when alcoholic drinks of every sort should be avoided. No one ever was made cooler by such drinks. On the contrary the effect is exactly opposite. A very large proportion of the sun and heat strokes are those of persons who have been indulging in such beverages. It is a mistake to talk of alcoholic "stimulants." Alcohol does not stimulate. It has a deadening and repressive effect on both brain and body. Soda water ice cream, lemonade are especially welcome in the hot months and in moderation are harmless, but every drink containing alcohol should be especially avoided during the heated term.

It is well to remember that vacation is a time for rest, as well as for change and recreation. It is possible, in fact only too easy and common, to overdo even amusements during vacation and the old joke about returning home to rest up after vacation has foundation in fact. Moderation in all things is a good vacation rule. The vacation is wasted unless one, in addition to having a good time, returns rested and refreshed for the work of another year.

A thorough campaign for the extermination of flies should be started in every city and town in Oklahoma, for, as almost everyone knows, the dangers incurred by allowing the presence of flies are almost inconceivable. Uncountable numbers of germs of the most malignant types may be found on every fly, and on everything the fly touches he leaves footprints of filth and atoms of potential destruction to human health and life. Flies can be exterminated in any locality. No fly ever moves to any great distance from its birthplace, and by cleaning up now, and with a little care each summer in the future, your city can be made and kept absolutely flyless.

A crusade for the extermination of flies in your city would be the greatest movement for civic betterment that you could undertake. Because of the disease transmitting powers of flies they should be kept away from human food. Tight fitting screens must continue to be used until the community as a whole learns to apply the simple measure for control of the fly, when screens will no longer be needed.

The annually organized systematically conducted "Clean up Campaign" is gaining in favor very rapidly in all parts of the United States. No community is too clean to participate in the movement. It is at least a suspicious sign when city officials or business men refuse to enter upon this program, fearing that others will think that their city must be terribly dirty to have to undertake a clean-up campaign. As a matter of fact a city is a large household and should be treated accordingly. No one thinks evil of a good housewife when she gives her home a thorough cleaning and this she does much oftener than once a year.

The clean-up is for the sake of health as well as for appearances, and the condition is such in many cities and towns that the crusade against the fly must also be made a matter ordinance, backed by the intelligent interests of the citizens. One stable owner who does not believe in the "notion" that flies originate in horse manure can easily supply flies for several adjacent blocks, hence there must be some ordinance to compel action.

Flies are gross food contaminators, hence food ordinance must also provide for protection against these and other insects as well. It is, however, manifestly unfair to compel merchants to protect their wares against flies if stable owners who are responsible for the propagation of the flies are not compelled to do their part in the prevention of the same. The State Board of Health will be glad to assist any community by furnishing copy of ordinance, which, if passed by the City or Town Council, will assist them materially in their clean-up campaign.

It requires but ten or twelve days, under favorable conditions, to develop from the egg to the fly, and in eight to ten days more the fly is ready to lay eggs, hence, there may be several generations of flies during the summer. Kitchen refuse, decaying fruit, garbage dump, in fact any organic material that is beginning to decompose, all afford breeding places for the housefly. But the source of the fly as a real nuisance is the horse manure pile, pure and simple.

The opportunity for flies to become infected is so great in all communities, even the most sanitary, that no fly should be trusted to alight on food prepared for human consumption. It should be remembered that a fly may cause relatively gross infection of any food upon which it alights after having fed upon infected substances, by the typhoid, cholera, or diarrhoea stools.

WARNING

We are advised that a very clever swindle is being worked by a young man calling on physicians in various sections of the country. He is fraudulently soliciting orders and collecting money for subscriptions to medical journals and for medical books published by various firms. He usually represents himself as a student, working his way through college and trying to get a number of votes to help him win a certain contest. He sometimes uses the names of L. D. Grant, H. E. Peters, R. A. Douglas and F. C. Schneider and he usually gives a receipt bearing the heading of some Society or Association,

such as United Students Aid Society; the Alumni Educational League; the American Association for Education, etc.

The description given of this swindler is: Young man of the Jewish type, rather slender, with very dark hair combed straight back and shows his teeth plainly when talking. The whole scheme is a fraud. The Societies mentioned do not exist. The idea is to collect money by offering special discounts and prices on medical books and journals and skip with the money. This young man does not represent W. B. Saunders Company, whose name he frequently uses. He is a fraudulent subscription agent and physicians, generally, should be on the lookout for him.

REPORT OF STATE BOARD OF MEDICAL EXAMINERS, APRIL 11-12, 1916.

Licensed					
Name	School of Graduation	Sch. of Prac.	Pr. Ct.	Home Address	
Ansel Jerome Robbins	Georgetown University, 1891	H	81	Mena, Arkansas.	
Harry Malcolm Read	Hahnemann Med. College	H	91	York, Pa.	
Robert W. Motley	Illinois Medical College	R	70	Muskogee, Okla.	
Austin Lee Guthrie	Ohio Medical College	R	84	Oklahoma City.	
Frank Moseley	Tennessee University	R	76	Millerton, Okla.	
Bennet Neal Oden	Ft. Worth School Medicine	R	73	Flanagan, Tex.	
Licensed by Reciprocity					
Chas. Otto Tydings	Louisville Hosp. Col. of Med.	R		Valley Station, Ky.	
Robert Melvin Shepard	Tennessee University	R		Star, Okla.	
James Hampton Hays	Michigan University	R		Ann Arbor, Mich.	
James William Wheeler	Tennessee University	R		Doddsville, Miss.	
Edgar Allen Johnson	Atlanta College P. & S.	R		Brooklyn, N. Y.	
David Herren	Memphis Hosp. Medical College	R		Supai, Ariz.	
Richard Dick Morris	Univ. Arkansas, Little Rock	R		Opal, Ark.	
James White Johnson	Baltimore Med. College	R		Union Level, Va.	
William Boyd Morrow	Jefferson Med. College	R		Laguna, New Mexico	
William W. Eley	Tulane University	R		Lucedale, Miss.	
David Moulton Gardner	Boston Univ. Sch. of Med.	R		Milford, Conn.	
Thomas Kinsey Bowles	Washington Univ., St. Louis	R		Kirkwood, Mo.	
Joe Darrough	Georgia Col. Eclectic Med.	E		Magazine, Ark.	
Meyer Harris Newman	Nebraska Univ. Col. Med.	R		Cody, Neb.	
Chas. Holly Luke Moore	Meharry Medical College	R		Vian, Okla.	
Licensed by Reregistration					
J. M. Thompson	Dallas Medical College	R		Ireland, Texas.	
A. H. Crouch	Missouri Medical College	R		Mounds, Okla.	
C. L. Kerfoot	Louisville Hos. Medical Col.	R		Prague, Okla.	
I. D. Hitchcock	Louisville Hos. Medical Col.	R		Afton, Okla.	
R. A. Williams	K. C. Hahnemann	R		Kusa, Okla.	
Isabelle F. Williams	Kan. City, Kan., Col. P. & S.	R		Kusa, Okla.	

R. V. SMITH, Secretary, Tulsa.

PROPAGANDA FOR REFORM

Controlled Clinical Trials.—At the "Cardui" trial which is now in progress, A. S. Loevenhart, Professor of Pharmacology and toxicology at the University of Wisconsin, testified as to the conditions under which the clinical trial of a medicine would give results as certain as those yielded by the usual pharmacologic methods. Professor Loevenhart had testified that he preferred his students to be familiar with drugs the value of which had been clearly worked out by accurate clinical methods and shown to be useful in the treatment of disease. Asked as to the character of the clinical trials required to demonstrate the value of a drug, he held that there was no difference between a careful clinical test and a careful pharmacological test. Loevenhart explained that to determine if Wine of Cardui had the claimed action an experimenter would take a certain number of cases of amenorrhea, perhaps 50, and divide them into two sets; treat 25 with Wine of Cardui and the others without it and then make an estimate of the amount of the material passed at the time of the menstrual period. Such trials carried out in a hospital, where the physician receives his reports from nurses and is not obliged to depend on the statements of the patients, he explained, would be as reliable as a properly conducted pharmacologic experiment (Jour. A. M. A., April 15, 1916, p. 1219).

Diagnosis of Female Disorders.—Manufacturers of "uterine wafers," etc., often advise the use of their preparations without physical examination of the patient when patients are disinclined to submit to such physical examination on the chance that one of the asserted constituents of the proprietary may hit the cause of the trouble. In this connection the testimony of J. Clarence Webster, professor of Obstetrics and Diseases of Women in Rush Medical College, Chicago, in the "Wine of Cardui" case, is of interest: He was asked: " * * * Is it necessary to make an examination of the female pelvis in order to determine the condition, the underlying cause of the condition and the treatment which is necessary?"

He replied: "It is necessary * * * because from symptoms one can rarely have any accurate idea of the pathological conditions in the body, in this part of the body. * * * There are many symptoms which are common to different conditions and consequently it is necessary in analyzing a case to make a careful physical examination." Again, when asked "Can you determine, or can the conditions of the uterus, or pelvic organs be determined merely by attention to description of symptoms which a patient gives?" he replied, "I cannot." (Jour. A. M. A., April 22, 1916, p. 1337).

Proper Self-Medication.—In the course of his testimony in the "Cardui" trial, John Leeming, M. D., Chicago, explained the extent to which self-medication is to be encouraged. Asked if it was very dangerous for a person who thinks he has a cold to take some aspirin without going to a doctor, he replied that, while in exceptional cases it might be exceedingly dangerous, in most cases of simple cold it would not be so, in that Nature's recuperative powers would in most cases throw off such a cold. He explained that he always advises his patients how to treat themselves for simple ailments and to come to him when there are danger signs. Asked if it was dangerous for a person with a cough to get any medicine without a diagnosis, Dr. Leeming replied that it would not be dangerous at all if the person understood his case and in consultation with his doctor he has been generally advised. In families where he is the attending physician he often advises not to send for him in case of a slight cold, but to take a little medicine that will help Nature to throw it off. (Jour. A. M. A., April 22, 1916, p. 1330).

What is a "Medical Authority?"—There has been a tendency to look upon publishers of text books as authorities and not to consider a physician as an authority on a certain subject unless he has written a text book on it. That the publication of a book does not prove its writer to be an authority is the opinion of J. Clarence Webster of Rush Medical College expressed at the Cardui case which is being tried in Chicago. Having referred to Frank Billings as an authority, Webster was asked to define the term "authority." He replied: "As far as a human being can be an authority on anything, I would regard a man who had worked at a particular subject in a scientific manner over a period of time, and who had more experience in that subject than other people, or most other people, as the best human authority that could be found." Asked if a man was more of an authority if he had written a book, Webster replied: "Often less in the eyes of the world." (Jour. A. M. A., April 29, 1916, p. 1410.)

Viburnum Prunifolium Inefficient.—J. Clarence Webster, holding the Chair of Obstetrics and Diseases of Women in Rush Medical College, testified in the "Wine of Cardui" case that he gave up the use of fluidextract of viburnum prunifolium because he believed that the benefit that he obtained from its use in pain in association with menstruation, was due to the alcohol in it. He had never had any reason whatever to believe that viburnum was of any value in warding off a threatened abortion. When in cases of painful menstruation he used the solid extract which contained no alcohol, he could not get the same results that he had obtained before and he gradually gave up the use of the drug altogether. Arthur A. Small, senior physician at St. Joseph's Hospital, Chicago, testified of extensive experience with the use of viburnum prunifolium, while resident physician in the Toronto General Hospital. As a result of his experience there he is of the opinion that viburnum prunifolium is of no value in the treatment of female disease. In these experiments both the fluidextract and the solid extract were used and it was found that the alcoholic solutions would prevent or lessen pain in some cases. In other words the only action was that of the alcohol. J. B. DeLee, holding the chair of Obstetrics at the Northwestern University School of Medicine, testified that years ago he gave large quantities of extractum viburnum prunifolium for the prevention of miscarriage, but found it useless. (Jour. A. M. A., April 22, 1916, p. 1338; May 13, 1916, p. 1566; May 20, 1916, p. 1639).

When Medicines Are Not Required or Are Useless.—Promoters of proprietary "uterine tonics" would have their preparation administered to girls and to pregnant women whether indicated or not and in conditions where medicines plainly can do no good. The testimony of E. E. Montgomery, Professor of Gynecology at Jefferson Medical College, Philadelphia, in the "Cardui" trial forcibly brings out the objections to the indiscriminate administration of medicines to girls and women and the futility of their use in cases which need surgical attention. Regarding the administration of "tonics" to girls at puberty he said that to advise a girl who is undergoing a physiological process that she must take some medicine which contains alcohol or any habit-forming drug at this period of her life, which is the most impressionable period of her existence, is doing that which is placing her future in peril, and is without any possible benefit. Regarding the administration of a "tonic" such as Wine of Cardui is supposed to be, he testified that it can do nothing but harm; that a woman because she is pregnant, pregnancy being a physiological process, does not need medicine, but needs attention. Regarding the use of medicines in uterine prolapse as a means of strengthening the unstriated muscle and thus to help the muscle to perform its work to hold the womb in place, Dr. Montgomery explained that the unstriated muscle in the women is not likely to be affected by medicine and that the tissue outside the womb is unlikely to be affected by medicine; to give medicine in the case of a woman who has prolapsus is just about as reasonable as to bathe one's suspenders with a solution when the elastic tissue has been destroyed from them. (Jour. A. M. A., May 6, 1916, p. 1481).

NEW BOOKS

In this department publications sent THE JOURNAL will be acknowledged as they are received. Reviews of new publications will be made only as space and time permit. Publishers are requested to bear this in mind in forwarding books, etc., for review.

MEDICO-MILITARY ASPECTS OF THE EUROPEAN WAR

Report from Observations Taken Behind the Allied Armies in France. By Surgeon A. M. Fauntleroy, U. S. Navy, Instructor in Surgery, U. S. Naval School. Issued under the direction of the Bureau of Medicine and Surgery, Navy Department, Washington.

This is a most thorough statement of the problems confronting the Army Surgeon in the European War. The book is copiously illustrated and there is much food for contemplation in the subjects considered. It will especially attract the physician having emergency or industrial work to do in time of peace, our National Guard Medical Officers and those possibly interested in the great questions of preparedness now agitating the minds of men in every walk of life in the United States.

THE CLINICS OF JOHN B. MURPHY, M. D.

The Clinics of John B. Murphy, M. D., at Mercy Hospital, Chicago. Volume V, Number 1 (February 1916). Octavo of 194 pages, 33 illustrations. Philadelphia and London: W. B. Saunders Company, 1916. Published Bi-Monthly. Price per year: Paper, \$8.00. Cloth, \$12.00.

The February Clinics contain interesting articles on the following:

Congenital Cyst of Neck Extending Into Axilla—Expectant Treatment.

Adenocarcinoma of Breast—Removal of Breast with Pectoral Fascia.

Talk on Certain Aspects of the Metastases of Cancer. 1. Ulcer of Duodenum Duodenorrhaphy Posterior Gastrojejunostomy by Button Method. 2. Retroversion of Uterus—Round Ligament Suspension.

Volvulus of Jejunum Untwisted; Gastric Ulcer at Pylorus—Posterior Gastrojejunostomy by Button Method.

Peridiverticulitis of Sigmoid—Incision and Drainage; Intestinal Obstruction—Release of Gut—Colostomy and Entero-Anastomosis by Two-stage Method of Mikulicz.

Urethral Caruncle—Ablation.

Luxation of Third Lumbar Vertebra with Compression of Cauda Equina—Spinal Decompression; Fracture-Luxation of Second Lumbar Vertebra with Compression of Cauda Equina—Spinal Decompression.

Tuberculosis of Thoracic Spine with Compression of Cord—Decompression of Cord.

Elongation of Capsule of Hip-joint Simulating Congenital Luxation—Immobilization in "Frog" Position.

Ankylosis of Hip-joint, Dense and Fibrous in Type, from Ancient Infection—Arthroplasty by the Fat-fascia Flap Method. Talk on Technic of Arthroplasty of Hip-joint.

Ancient Tuberculosis of Hip-joint—Arthroplasty—Tenotomy of Adductors.

Ancient Tuberculosis of Hip-joint with Pathologic Luxation of Femur—Tenotomy of Adductors. Talk on Origin, Nature, and Treatment of Tuberculosis vs. Metastatic Pyogenic Joint-Disease.

Ancient Tuberculosis of Hip-joint—Tenotomy of Adductors.

Ancient Metastatic Bacterial Synovitis of Hip-joint with Adduction Deformity—Three-stage Operation: (1) Tenotomy of Adductors; (2) Tenotomy of Iliopsoas; (3) Stretching by Manipulation, Osteomyelitis of Femur—Sequestrectomy (Two Cases).

Traumatic Rupture of Internal Lateral Ligament of Knee-joint—Syndesmorrhaphy. Talk on Certain Injuries Within and About the Knee-joint.

External Luxation of Patella with a Foreign Body in Knee-joint—Removal of Foreign Body—Imbrication of Vastus Internus Aponeurosis.

Bony Ankylosis of Knee-joint—Three-stage Operation of Arthroplasty—Talk on Arthroplasty of Knee-joint.

Hypertrophic Villous Synovitis of Knee-joint—Synovial Capsulectomy.

Ankylosis of Knee-joint Following a Furuncle—Arthroplasty. Talk on the Treatment of Infective Synovial Arthritis in the Acute Stage.

Tuberculosis of Knee-joint—Resection by Concavoconvex Method—Subpatella Arthroplasty—Hallux Rigidus—Resection and Arthroplasty; Pes Planus—Elongation of Peroneal Tendons

—J. H. W.

THE MEDICAL CLINICS OF CHICAGO

The Medical Clinics of Chicago. Volume I, Number 5 (March, 1916). Octavo

of 220 pages, 67 illustrations. Philadelphia and London: W. B. Saunders Company, 1916. Published Bi-monthly. Price per year: Paper, \$8.00; Cloth, \$12.00.

This issue contains clinical reports on Roentgenologic Examination of Intestinal Stasis, Dr. J. T. Case; Acute Nephritis Following Acute Tonsillitis, etc., Dr. Robert B. Preble; Carcinoma of the Stomach simulating pernicious Anemia, Dr. Chas. Spencer Williamson; Tumor of the Spinal Cord, Dr. Ralph C. Hamill; Typhoid Fever Resembling Pneumonia, Dr. Frederick Tice; Congenital Syphilis, Dr. Isaac A. Abt; A Case of Lung Abscess, Dr. Chas. L. Mix, and many other contributions by the same clinicians.

CANCER OF THE STOMACH

Cancer of the Stomach. A Clinical Study of 921 Operatively and Pathologically Demonstrated Cases, by Frank Smithies, M. D., Gastro-enterologist to Augustana Hospital, Chicago. With a Chapter on the Surgical Treatment of Gastric Cancer, by Albert J. Ochsner, M. D., Professor of Clinical Surgery in the University of Illinois. Octavo of 522 pages with 106 illustrations. Philadelphia and London: W. B. Saunders Company, 1916. Cloth, \$5.50 net; Half Morocco, \$7.00 net.

This critical review of an unusually large number of cases of malignancy covering a close observation over a period of ten years, consists of discussions on the subjects concerned with cancer. Every phase is considered in appropriate chapters, but those to be especially noted by the reader are on gross, microscopic and experimental anatomy; symptomatology; functional and Roentgenologic examination; gastric ulcer with respect to the affection; gastric cancer; differential diagnosis and surgical and non-surgical treatment. Naturally the plates are originals mostly and are taken from drawings made at the Mayo, University of Michigan and Augustana clinics. The Author, in his preface, states that it has been at least a decade since a monograph on the subject has appeared and this fact certainly warrants a critical writing on the subject which that time has greatly enriched. The surgical treatment of cancer could hardly be handled by any man in better position to do it justice than Ochsner. The entire volume is a splendid contribution to the literature on the different phases of cancer.

THE PRACTICAL MEDICINE SERIES, 1916.

Comprising Ten Volumes on the Year's Progress in Medicine and Surgery, under the general editorial direction of Charles L. Mix, A. M., M. D., Professor of Physical Diagnosis in the Northwestern University Medical School.

General Medicine, Edited by Frank Billings, M. S., M. D., Head of the Medical Department and Dean of the Faculty of Rush Medical College, Chicago. Illustrated, Price \$1.50; Price of the Series of Ten Volumes, \$10.00.

As is now well known this series is a review of the world's literature on the advances and achievements of medicine and surgery and the allied branches in general for the preceding year.

Each volume has liberal notation where deemed necessary by the editors. The authoritative opinions and judgment of the various editors of these reviews should commend them especially to the busy man who wishes to keep abreast of the times.



OFFICERS OF OKLAHOMA STATE MEDICAL ASSOCIATION—ELECTION MAY 11, 1916.

Meeting Place—Lawton-Medicine Park, May —, 1917.

President, 1916-17—Dr. Chas. R. Hume, Anadarko.

President-elect, 1917-18—Dr. W. Albert Cook, Tulsa.

1st Vice-President—Dr. Fowler Border, Mangum; 2nd Vice-President—Dr. A. R. Lewis, Ryan;

3rd Vice-President—Dr. Horace Reed, Oklahoma City.

Secretary-Treasurer-Editor—Dr. C. A. Thompson, Muskogee.

Delegates to American Medical Association—Dr. John Riley, Oklahoma City, 1917; Dr. M. A. Kelso, Enid, 1917-18.

COUNCILOR DISTRICTS.

1. Cimarron, Texas, Beaver, Harper, Ellis, Woods and Woodward; Councilor, Dr. J. M. Workman, Woodward. Term expires 1919.

2. Roger Mills, Beckham, Dewey, Custer, Washita and Woodward; Councilor, Dr. Ellis Lamb, Clinton.

3. Harmon, Greer, Jackson, Kiowa, Tillman, Comanche and Cotton; Councilor, Dr. G. P. Cherry, Mangum.

4. Major, Alfalfa, Grant, Garfield, Noble and Kay; Councilor, Dr. G. A. Boyle, Enid. Term expires 1919.

5. Kingfisher, Canadian, Oklahoma and Logan; Councilor, Dr. Fred Y. Cronk, Guthrie.

6. Caddo, Grady, McClain, Garvin, Stephens and Jefferson; Councilor, Dr. C. M. Maupin, Waurika. Term expires 1919.

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EARLY CANCER OF THE STOMACH*

By ARTHUR W. WHITE, M. D., Oklahoma City

As a result of the propaganda first started on the Continent, and which has been taken up more recently in this country, the physician, the statistician and the layman have all been enlightened and feel the need of further education in the danger, the treatment and above all the early recognition of neoplasms. It seems, therefore, that the ground is ready for the wide-spreading dissemination of our knowledge and the lack of it concerning cancer.

The work produced during the past decade has taught us the protean aspect and the very broad view that we must take of the subject from whatever angle we approach it. It is not long since the upholders of the parasitic theory and those of the non-parasitic theory were at odds; yet evidence has been produced to show that either, or both, may be correct.

The etiology is far from being solved; nothing definite and constant has yet been shown which may account for the strong tendency of some to fix, or attempt to fix, such a close relationship between cancer and other recognized diseases and conditions. It is apparent that the thing to a great extent is a question of history in an individual case. Accurate diagnosis of gastric ulcer has only been made within the past five years, hence a history of an ulcer dated back of that time is not to be wholly relied upon in compiling definite data.

These facts may help us to understand why statistics of different men vary so much in respect to, e. g., gastric ulcer and gastric cancer, because some men take up the question of cancer in its development from that of ulcer, while others start in their investigation from almost the opposite angle. The difference of opinion as to the ulcer being a causative factor in the production of gastric cancer is a question of the manner and definiteness of eliciting the history from the patient; also of the ideas of the historian as to what constitutes ulcer symptomatology. Hence we are still forced to seek a "happy medium" or stay well within the law of averages for practical knowledge.

Attention was first called to this peculiar relationship by Rodman in 1904. At that time the diagnosis of gastric ulcer was not an active thing—it was just at the beginning of the period when definite work was being done, but before any real knowledge had been obtained. It was at this time that the Mayos first announced any of the results of their excellent work on the *living* pathology. These results were almost contrary to those obtained by the European men, after ten years of work along the same lines on *dead-house* pathology. Further, this same thing may be said of the diagnosis of cancer, e. g., Cabot has shown

*Read in Surgical Section, Oklahoma State Medical Association, May 10, 1916.

that only 72 per cent. of all positive diagnoses of gastric cancer was proven at autopsy, and that cancer is more commonly complicated with fibromatosis than with ulcer.

Wilson, from his very careful observations in 684 cases, shows a close relationship (71 per cent.) between cancer and ulcer but adds: "This question is unanswerable at the present time, with our present methods of investigation, because (1) no one has ever seen a chronic gastric ulcer in process of development; (2) no one has been able to witness the stages of reaction to irritation through which the tissue of the stomach wall passes during the formation of ulcer or cancer; (3) no one has ever recognized cancer in the process of development anywhere in man or animals; (4) even the most skilled pathologist cannot point out the line of demarkation between simple hyperplastic cells of a chronic ulcer and those associated with cancer; (5) no one has experimentally produced a cancer."

McCarty, from a careful study of 280 calloused gastric ulcers in which there was no clinical or gross surgical hint of malignancy, found in 63 per cent. atypical cells in their hyperplastic edges. This is suggestive etiologically, but as McCarty frankly admits, it carries no proof that those ulcers, showing this arrangement and structure, were ever anything but carcinoma. Smithies believes there has been much misunderstanding on this point. The publication of reports claiming that the clinical type of dyspepsia, which frequently precedes what is commonly recognized as a malignant form of gastric disease, is often not to be differentiated from that of chronic ulcer, has given rise to a widespread impression, that vice versa, a like number of chronic ulcers terminate as cancers. This study of the early history of 921 proven cases of cancer indicated that more than 65 per cent. had a long dyspeptic course, preceding the clinical evidence of malignancy. But this does not establish the fact that a like proportion of benign ulcers eventually terminate in cancer.

Other men, with varying opportunities following various lines of investigation, have published reports and statistics with many variations—from Jenger, who stated in 1882 that "all cases of gastric cancer originated in gastric ulcer," to the present day men, as e. g., Mayo with 54 per cent; Hartman and Sapeslka each with 10 per cent; Moynihan with 72 per cent; Smithies with 41.8 per cent. This emphasizes in our minds that whatever the relationship between ulcer and cancer may be, it has not been definitely determined; that the viewpoint, the method and the facilities all play an important part in determining the results. We must look further than benign conditions in the stomach for a cause of gastric carcinoma. Abelman & Beck concluded that carcinoma is an infectious disease. Gaylord, after exhaustive studies under conditions most favorable, rather favored the idea of contagion as one, at least, of the methods of propagation of all cancers. On the other hand, Maude Slye, of Chicago, quite recently has demonstrated that the mouse cancer, which is the same, or at least analogous, to the human type, is not an infection in its behavior and is not contagious. She says: "The most careful and long continued experiments have failed to show the transmission of cancer by contact in the same cage or in adjoining cages." She says further: "The clinical behavior of cancer in this laboratory is opposed to the theory of infection," also the results of her experiments through several generations show cancer to be hereditary in the strict sense. The infections common among her mice are no more liable to occur in one family than another if the individuals are separated. Whereas, cancer crops out, no matter where the mice are kept. "Cancer can be bred into and out of strains at will. It can be bred out of a line, one side of which originally carried 100 per cent. of cancer. Cancer is not transmitted as such but rather as a tendency to occur in certain families from a given provocation, probably in the form of over irritation."

Hence the sum total of our knowledge of the etiology of cancer is an hereditary tendency plus an over irritation, to a previously selected site. Whether this reverts to the old Connheim theory or whether it is technically different, the idea

is pretty much the same, and this may explain why gastric ulcer gives such high percentage as a causative factor in cancer in one line of cases and such a low percentage in another line. Until we have reason to change this present theory of causation to a more definite one, and one that is unquestionably accurate, and which will open the way to a plain, definite diagnostic method for the determination of the presence of neoplasm very early in the process. We are most concerned with the accuracy and the practicability of any and all of the known methods. These methods or tests have been developed more or less empirically. Men recognizing and accepting the various methods as to end results have varied in their conclusions as to the relative value of given tests. These differences may be accounted for by the makeup of the individual, surrounding circumstances and opportunities, e. g., Bloodgood lays more stress upon the clinical evidence; Smithies on the physiologic tests, microscopic examinations; Case and the Mayos upon the X-ray (at least relatively); while, Sippy and Billings depend more upon the system combining both the clinic and laboratory method (they, with Smithies have not attained the same degree of confidence in the X-ray as have some others). They all, however, make use of all of the methods at hand—some seemingly obtaining greater accuracy with one and some with another.

In their method of making a diagnosis, the Mayos consider the history first; X-ray examination second; physical examination third (including symptomatology) and laboratory method last. Smithies considers history first; the laboratory examination second, physical examination third, and X-ray fourth. Sippy considers first the history; second in importance a system combining physical examination, laboratory methods and symptomatology. He considers the X-ray of least importance, and has found it often misleading. The Mayos sometime since announced the making of a positive accurate diagnosis of carcinoma of the stomach in 97 per cent. of cases proven on the operating table. Sippy and Smithies both claim to have determined positively in numbers of cases the presence of cancer without the assistance of the X-ray and which were not found on X-ray examination.

Case, on the other hand, says; "All cases at Battle Creek, subject to laparotomy, are X-rayed. Not a single case of gastric cancer has been revealed at operation that has not been diagnosed by X-ray."

It is very evident from such conflicting reports that one must not be unduly influenced by any one method to the exclusion of the others, but one must make honest use of them all. To do this requires the closest "teamwork" on the part of the patient, physician, laboratory expert, surgeon and pathologist. This, of course, necessitates explaining to the layman the limits of our diagnostic ability and the great advantage of exploratory laparotomy in order first, to give the patient every benefit, and second, to give us definite data as to the value of the diagnostic method.

All agree that the history in a given case comes first; but when we consider the varying histories preceding or accompanying the development of a gastric cancer, we are prone to wonder if it is not more a chronological position than one of import. If we are to accept Maud Shye's conclusions, a definite family history showing cancer in one or more lines of the family, it should have some weight. Its absence, however, is of little value. Mayo says there is no evidence to justify the idea of heredity. Again we find (averaging the experiences of Smithies and Wilson) gastric cancer appears in types commonly recognized as peptic ulcer in 47.3 per cent. of cases, and with a family history in 9.2 per cent. It appears in those who have had previously perfect gastric health (the type known as gastric atheletes in 31.9 per cent. of cases). It appears in those giving a prolonged indefinite gastric history in 9.12 per cent. of cases.

According to the pathology as worked out by McCarty, first, acini are found consisting of two rows of cells, an outer and inner row. This he calls "primary hyperplasia." This condition is never a cancer. Second, acini, as above, appears

in which the inner row has disappeared. There is a proliferation of the outer row of cells. (Secondary hyperplasia). This may or may not be carcinoma. Third, acini are found in which the inner row of cells has disappeared. The cells of the outer row are hyperplastic; the line of demarkation between the acini and the stroma is confused, and often partially destroyed. The cells of the outer row are seen in the stroma; also the cells within the acini are often morphologically indistinguishable from the epithelial cells in the stroma. This is termed "tertiary" or "migratory" epithelial hyperplasia. This is always carcinoma.

As the pathological examination of the stomach is of course out of the question in attempting an early diagnosis without laparotomy, we have left the symptomatology, physical examination, X-ray and physiological tests. Rather than lay undue stress on any one method, it seems to us that they must all be combined, especially the symptomatology and the physical and laboratory examinations.

It is characteristic of stomach diseases that definite subjective signs are evidenced in more classical ways than in most diseases elsewhere in the body—probably due to the fact that even before marked pathological changes occur the physiologic functions are perverted in a given disease. Hence we have a right to expect more in the way of symptomatology in beginning cancer of the stomach than in cancer elsewhere in the body. And for this same reason the physiologic tests and the symptoms should be considered together; e. g., according to R. Schmidt, Sippy, Bainbridge and other, pain is one of the early symptoms of cancer, as it is in nearly all organic diseases of the stomach. This pain cannot be explained away on physiological grounds as can most other gastric pains. It occurs in a definite way and at a definite time and can be determined as cancer pain usually by exclusion. If the pain in time, character and location is difficult to differentiate from the so-called ulcer pain, either determine that no free h. c. l. is present in the stomach, or if present completely neutralize the free h. c. l. which will correct the ulcer pain.

Again, as to the question of motility, retention occurs in more than 72 per cent. of gastric cancers, according to Von Eiselsberg; and 90 per cent. of gastric ulcer cases. Now, applying the well-known rule of hyper-motility in achlorhydria cases by neutralizing the free h. c. l. in case of ulcer, the retention disappears while it is not affected in carcinoma. This presupposes of course the ruling out of tumor, adhesions, etc., that might mechanically interfere.

As to the changes in the normal secretion of the stomach, Eiselsberg found h. c. l. absent in 54 per cent. of cases and in abnormal amounts in nearly all of the 46 per cent. remaining; the total acidity was low in every case, while the combined acid was high. He calls attention to quite a striking fact; no acidity in early cases; acidity present in advanced cases—i. e., acidity indicates a non-operable case. Lactic acid is a constant finding in percentage varying from 42 per cent. to 75 per cent. but is never found in stomachs showing free h. c. l. above 10 per cent.

Many tests of various kinds have been devised. Some have been discarded or misleading; others have proven or are proving to be of considerable value; while still others are too new to be passed upon. The Benzidine and Guaiac tests is positive in probably 72 per cent. of tests; the e. g. lycotryptoptran test is present in about 40 per cent. of cases, but is of no especial value because a diagnosis is possible by clinical examination when possible with this test. The Wolff-Jung-hans soluble albumen test is attracting considerable attention, but evidently has not been standardized from the fact that investigators report positive results in all the way from 30 per cent. to 80 per cent. Evidently a special value will be in differentiating cancer from a simple achylia and pernicious anaemia. The sero diagnosis test recently devised by Emil Abderhalden on the presence of protective ferments in animal blood consists in testing the capacity of the blood serum of the protective person to digest a given quantity of cancer protein. A strong action indicates malignancy; a weak action the reverse. This test probably

needs greater standardization. C. B. Ball, however, reports 51 cases, 31 positive and 20 negative, all of which were verified by post-operative pathological findings.

The Boas-Oppler bacilli, which are really clumped bacilli bulgaricus, occur in 94 per cent. of advanced cases, but are rarely found in the early operative stage.

There are many other laboratory tests which are either not fully developed or for other reasons are impracticable, such as the Haemolytic test of Crile; the Yamanouchi test; the Ransohoff depepted test. Still another test that should be mentioned in passing, considered by Sahli as of practicable value, is the digestibility of cat gut by the cancer stomach, even though h. c. l. is absent. As to the X-ray, Case and White and Leonard have given the most satisfactory reports, but do not as yet seem willing to accept the responsibility of making a positive diagnosis. Case advises that a suspicious case be X-rayed in four or five weeks, which seems to us rather a long period of delay at such a vital time to the patient. White says, "our mistakes have been errors of commission, rather than errors of omission"—i. e., the X-ray men are more positive in determining the absence of carcinoma than its presence.

In diagnosis there has not been found a definite sign which will tell us of the presence of cancer of the inner organs, and the state which we have reached is not one at which our satisfaction lies in retrospect, but we feel a keen interest in peering into the future at the work which is to come, and the great service which will soon be accomplished by systematic education of the public and the profession.

In conclusion (briefly) from our study of the very extensive literature on this subject, we believe first, that cancer of the stomach is not diagnosed early enough to determine the presence of a possible preceding ulcer. The absence of an ulcer surface in an advanced cancer proves nothing. Second: That ulcer is a physiological question in the beginning, while primarily cancer is a pathological one. Third: Every ulcer that does not prove to be a simple ulcer, in a reasonable time, under proper management and competent observations, should be considered a malignant condition. Fourth: At present our knowledge points to the hereditary tendency plus an irritation as the cause, but we are convinced that the infection theory will predominate in the near future. Fifth: That the X-ray is of no value in early diagnosis; that the laboratory finding must be carefully interpreted, and finally we urge for the future the closest co-operation between the internist and surgeon in the study of this subject.

DISCUSSION

Dr. John Riley, Oklahoma City: Probably outside of tuberculosis no question is more important to mankind than cancer, especially cancer of the stomach. When a diagnosis of cancer of the stomach is made, the physician apparently loses interest in the patient and the patient realizes his hopeless condition. We must realize that when a patient presents himself to us and tells us of gastric disturbances, and if this man or woman is in the cancer period of life, we must get away from the practice of giving him a pill or something for his stomach. As long as this practice goes on, cancer of the stomach will continue not to be diagnosed, and thirty to forty thousand people will annually die as a result. Any ulcer that does not yield to ulcer management within three or four weeks is probably not ulcer and demands exploration. If we are going to do anything with cancer of the stomach, then we must do it early. The court of the last resort at this time is the microscope. The same thing that was done fifteen to twenty years ago in regard to gastric and duodenal ulcer is being done today with ulcer and cancer. Today all acknowledge an ulcer of the duodenum is more common than ulcer of the stomach. Here another problem confronts us, and it is a question of making a diagnosis of the stomach cancer early. It is a matter of taking the

time. Strip the patient and make a through examination. We know with cancer there is usually no free hydrochloric acid. All the tests, the X-ray and all laboratory tests so far have been of little value in giving us an early clue. It is an exploratory incision that will help to make the diagnosis. How many cases of cancer of the stomach are cured by medicine? None. The cases that have been cured are those that have been diagnosed with the aid of the microscope. These are the ones that have been diagnosed early and cured. You could talk on this subject for weeks, for it is an important one. It is one of the most important things that will come before you until you act in the same manner that you are today in regard to tuberculosis. You must strive to make a diagnosis of these cases. The history of these gastric cancers does not show that there is always a gastric disturbance. There are all grades of cancer and we must strive to make diagnosis. That is the problem today. We cannot afford in the light of the evidence we have today to wait and let these gastric cases go on and die of cancer because we must use the exploratory laparotomy. The exploratory laparotomy will be used more and more. When you explain to your patient that it has only a mortality of 6-10 per cent. they will realize that you must take this into consideration and in this way we will be able to diagnose cancer in its early stages, to cure it in its early stages and cut down the awful death rate from cancer in the United States.

Dr. Gayfree Ellison, Norman: I believe Dr. Riley is right. We have to educate the public. We know without the co-operation of the public that we have no relief. When the individual begins to realize that it will help. Doctors are afraid of getting the reputation of not being able to make a diagnosis. We should not let them go, but should ask them to go to someone else if we cannot tell what is the trouble. We have got to get into their reading material and educate them. Probably through the county papers would be the best way to get at them; probably through the Board of Health. A little paragraph every week on cancer would soon make them take notice. It is just education pure and simple. How we are going to get at that is questionable. We are entirely too ethical. We are too particular about ourselves. If any one of us writes a letter and gets it in the newspapers we say they are advertising. I have been criticised because I went before the Ladies' Society and talked on public health matters, even when I am not in practice. Still it is not considered ethical for me to go before them and help educate them. In 1915 the death rate from cancer was more than from tuberculosis. Now we have another method of advertising probably, and that is to get after some of those people who are "curing" cancer. We ought to get after them. That is one way of advertising our weakness and strength. If we take up a systematic educational campaign against cancer we will succeed. We have got to make early diagnosis or quit.

Dr. A. W. White (Closing): I thank the gentlemen for the above discussion. Cancer is on the increase at a greater rate than any other disease we have. It is on the increase greater than tuberculosis. The greatest increase is in the stomach and we can guess very readily what we are going to have to confront us—method whereby we can make a diagnosis, an early diagnosis in cancer—is what we must do. We must obtain some definite way of accomplishing this if possible. In the case of an ulcer, it needs from a few days to a few weeks to tell us whether a patient is going to respond to our treatment. If it does not disappear it is up to us to conclude that the patient has beginning cancer and to have a laparotomy. A little judicious treatment will soon show whether it is temporary or not. If they do not respond we must consider it is a cancer and treat it as such and give the patient a chance. We must use our influence against the cancer quacks. A man is up here on Fourth street with a sign as big as a house, "125 men wanted in the next few days to cure cancer." If you tell a man he has cancer he goes to the quacks, or chiropractors or someone of that character. We must not keep this to ourselves. We must publish it or we are going to face a worse thing than tuberculosis.

CARCINOMA OF UTERUS*

By O. R. GREGG, M. D., Alva, Oklahoma.

This morning while walking the streets of your city, I had a head-on collision with one of the newsies. He showed me the true American spirit by smiling and saying: "Safety First." What a motto—"Safety First." Indeed and in truth at this time it is the popular motto. You see it in your passenger and street cars. It decorates the front of your automobiles. Factories and railroads spend vast sums of money to herald this great truth of preservation of human life and human limbs. While this campaign is being waged, is it not so that we as a profession have been caught asleep at the wheel?

Do you know that one woman out of every ten, past thirty-five years of age, will die of cancer while only one in fourteen will die of consumption. These are statistics of the United States, which are somewhat greater in England, as one in eight, past thirty-five years of age, will die of cancer. Welch, who observed 31,482 cases of cancer, found that taking both men and women, drew his conclusions that 21.4 per cent. of all cancer cases primarily started in the stomach and 29.5 per cent. found their primary site in the uterus; showing that about one-fifth of all cancers started in the stomach and about one-third had origin in the uterus. McGlinn, by careful computation, states that in 1907 cancer of the female genitals killed three times as many women as abdominal tuberculosis; five times as many as venereal diseases; fourteen times as many as tumors; seven times as many as ulcer of the stomach; twice as many as endocarditis; almost as many as typhoid fever; twice as many as appendicitis, and five times as many as were killed in all railroad, street car, horse and carriage and automobile accidents.

Gentlemen, does this look like "Safety First"? Let me repeat, almost as many women die of cancer of the uterus as of typhoid. More women die of cancer than of tuberculosis, and five times as many women die of cancer of the genital organs than are killed in all motor or horse drawn conveyances. In the name of God, men, let's get busy and stop this awful death rate among our women. Can this be remedied? Most emphatically yes. Remember this, that *in the beginning cancer is strictly a local and not a blood disease. It is easily cured when removed early in its course. It is incurable in the later stages.* (Message of cancer committee of Clinical Congress to the People of America.)

First precaution: Let us as obstetricians, gynecologists and general practitioners leave our confined women in such a condition that we will not invite cancer to our door. I do not know the cause of cancer. You know and I know that there is always a precancerous state, and that in the beginning cancer is a local disease. So far we agree. I believe that irritation and erosions of the cervix are all precancerous. Chimney sweeps are predisposed to cancer of the scrotum by irritation and trauma. Chewing the betel nut produces cancer of the mouth, and practically all cancers of the stomach are preceded by an ulcer. Then why not deduce that cancer of the cervix is at least predisposed by injuries to that organ. Kelly, in his private practice, has seen only three cases of cancer of the cervix in the nullipera, and one of these had been dialated. Cullen, out of fifty cases available, has found forty-nine had borne children, and seventeen of the fifty had miscarried, while one-half of the cases were mothers of five or more children.

I have never, and I believe the most of you have never seen a cancer of the cervix in a nullipera. Therefore it would stand to reason that cancer of the cervix is practically always present and must in my opinion be due to injury of that organ.

Remedy: Take special care in your deliveries, that you do not injure the cervix. If you do cause injury, repair at once if possible. If not, by all means in three or four months. If on examination of your female patients you

*Read in Surgical Section, Oklahoma State Medical Association, May 10, 1916.

find laceration, insist on a repair as precaution of cancer. If your woman is past forty, and the laceration is extensive, insist on an amputation as a prophylactic measure, for by this means and this means only you remove all tissue prone to become cancerous.

Precaution No. 2: We must educate our women to the danger of cancer of her organs. Can this be done? Most certainly so. A few years ago you had to talk a half day to convince a mother that an adenectomy should be done for the benefit of her child. Now the doctor very seldom makes the diagnosis. The parents, school teachers, the omnipresent neighbor women, and even the play-mates will make your diagnosis, and insist that the adenoids be removed. In like manner, only a short time ago, you had to plead with tears in your eyes for the appendectomy. Now you are not considered competent unless you advise immediate operation (and, by the way, you will notice an enormous decrease in the mortality of this disease in the last two years). If you educate the public to adenoids and appendicitis, you can educate them to cancer. Since Winters of Germany began his campaign toward educating the public to the danger of cancer, the number of cases of cancer of the cervix coming for treatment has increased 80 per cent. If this can be in Germany, why not in America?

First: The people must be taught the danger of cancer. Just how at this time is more or less of a question. Every mother should understand that being a mother she is prone to cancer of her maternal organs. When she reaches the age of thirty-five, she should be alarmed at any unusual discharges or any unusual flow, and should immediately consult her physician.

Second: You as a physician must be able to recognize these cases in the beginning and advise the proper treatment. Only 40 per cent. of all cases that come to the surgeons, hands are operable. Yet at one time 100 per cent. of these cases could have been saved. By either their own negligence or the negligence of their physician, 60 per cent. of these cases are allowed each year to go down to a prolonged and horrible death. Do not be found guilty of prescribing for a woman who has pelvic disease without first making a thorough examination. If you find an ulceration, induration, foul discharge, or hemorrhage, think constantly of cancer and by process of elimination make your probable diagnosis. Then if you feel that there is the slightest possible chance of cancer, either of the cervix or fundus, make positive by pathological examination of curette scrapings, or excised specimens. Diagnosis is fast becoming a simple matter in this age of laboratories on every hand. Above all things, doctors, make your diagnosis, and make it now. Delays are dangerous. Keep constantly before you this: *That all leucorrhoeal discharges and all flows not accountable for otherwise are cancerous.*

Having made your diagnosis now, the all-important question arises: Is the case operable? Is the involvement too great to warrant operation? If the uterus is freely movable, operation is indicated.

If it is immovable, you must determine whether it is due to your cancerous condition or to some former inflammatory process. If you have a mass surrounding one or both tubes, or a history of specific or other inflammatory trouble, your condition may not be due to cancer and may still be operable.

If, on the other hand, the examining finger finds that the immobility is due to the extension of the cancerous condition extending to rectum, bladder and abdominal viscera, then your case is inoperable and only palliative measures justified. If in doubt, examine under anaesthesia, and if doubtful still do an exploratory section. If operable do a pan-hysterectomy at once. If not operable, simply close the abdomen.

As to operation, that is immaterial so long as you remove the parametrium and do not allow your incision at any point to intrude into carcinomatous tissue. Permit me to quote from Crossen: "It is evident that any operation, whether vaginal or abdominal, that does not remove the parametrium along with the uterus,

is not admissible as an operation for cure of cancer of the cervix except in certain rare cases. Any operation, whether vaginal or abdominal, that does remove the parametrium along with the uterus is admissible in that it fulfills one of the requirements." Make it a rule of your operation that first you are going to remove everything that casts the slightest shadow of suspicion of carcinoma, and in so doing that you will remove the parametrium and a goodly number of lymphatics along with the internal genitalia. Second: That you will make your incision as far from your cancerous tissue as possible. At no time will you permit your knife to cut into cancer infiltrated tissue at any place, for these cancer cells are very easily transplanted to healthy tissue. If you must separate infiltrated tissue, you had better use the cautery, for by this means only can you prevent metastasis. If you are careful in your operation, there is no reason why you should not have 100 per cent. life rate in your operable cancer cases, the ordinary dangers of abdominal section of course excepted.

Now for the inoperable cases. We have all been eagerly watching Kelly and his radium treatment. His cures are certainly remarkable. It is, however, a certainty that this treatment is not a practical treatment for the ordinary surgeon and gynecologist.

Percy has promulgated a treatment which is to my mind the most reasonable one that we have at this time for these inoperable cases. He claims that carcinoma is destroyed when the temperature of the mass is raised to 113 degrees F. On the other hand normal tissue cells are not destroyed until the temperature is raised to 132 degrees F. His method is slow heating by an especial cold cautery iron. The iron is introduced to the site of the cancer and the current very slowly turned on, until the heat is uncomfortable to the mass in the rubber gloved hand. The hand of the surgeon can tolerate a heat of about 115 degrees F, which is the temperature required to destroy malignant cells. This temperature will not cause a burn of the first degree. He instructs that (first) a low degree of heat is required, and (second) the heated iron must not be moved about. In other words, it must be retained in one position until that part of the malignant mass has been thoroughly heated for at least ten minutes, when it can be moved to a new location and the process repeated. Third: The heat must be applied until all the malignant fixed pelvic structures are freely movable.

Most of the cases coming to him were of inoperable type. In three years 90 per cent have been made operable by heat. Of the 100 per cent mortality kind, he had six that had lived three years; one that lived three years and died of cancer of the liver, but with the pelvis free from carcinoma cells.

Balfour, of the Mayo Clinic, in a report of thirty-one cases of cervical carcinoma, which were too far advanced to permit primary radical operation, states that in all there had been a cessation of bleeding and discharges immediately following the treatment, with a corresponding improvement in the general condition, an improvement of course particularly striking for bleeding, sepsis and absorption had gone to the point of emaciation. Of the above patients treated, secondary hysterectomy was performed on nine. And in five the pathologist was unable to find any trace of malignancy.

Personally, since I have become interested in the Percy method, I have not had an inoperable case in my office, but I want to assure you that the next woman that comes to me with a neglected cancer is going to receive the cold cautery treatment.

Summary

Notice the frightful inroads that carcinoma of the uterus is making on our female population.

Carcinoma is a disease predisposed by the resultant injuries of repeated childbirth and can be eliminated by careful deliveries and prompt repairs.

Carcinoma of the uterus in the beginning is a local disease and can be cured by operation.

Only 40 per cent of the cases now coming to the gynecologist are operable, the other 60 per cent being doomed to a slow and certain death by either negligence on their own part in not consulting a physician or criminal negligence on the part of the physician by not making an early diagnosis.

It is possible to save all cases of carcinoma if the patient would early seek the advice of a physician, and if the physician would make a prompt and accurate diagnosis and advise radical operation.

In order for operation for cancer of the uterus to be 100 per cent successful, the organ must be removed without the malignant tissue being broken into at any place.

Last, but not least, I believe that we have found in the Percy heat method a means by which inoperable malignant disease can not only be palliated, but to a great extent converted into operable cases.

Discussion

Dr. Andrews, Oklahoma City: Just a word as to the diagnosis in the first very early cases and then with reference to the supposed inoperable ones. I think in those cases we can tell and determine by the index finger in those very early cases if there is more than passing interest in that so-called erosion. Some of the best results I have had was by really not paying so much attention to what I see as to what I feel with my finger. Second, we must remember that often times what we find in the pelvis is an inflammatory condition and not always carcinoma itself. It shows us why it is able to make for us operable cases, so we must remember that not all of our cases are cancerous.

Dr. Blesh, Oklahoma City: One of the most important facts, I think, taken in connection with cancer of the cervix, is this one fact which should be written down large, that is, that 19 per cent of patients suffering with cancer of the uterus die with toxemia before metastasis has occurred at all. 19 per cent of these cases, if something adequate is done, will be saved no matter what the appearance of the condition locally is. Nineteen per cent of them, if you do not throw up your hands in despair, can be cured.

In this very class of cases comes forward the Percy method and it is founded upon a well-fixed and demonstrated principle — the principle that cancer cells succumb to a heat which does not kill the normal tissue cell.

But he who thinks he has in the Percy method a treatment to take the place of radical surgery is in error, for the method if properly employed does have a mortality equal to that of hysterectomy, but we must remember that it is applied in late cases in which nothing else can be done. Wherein lies the danger? Just in this, that when there is extension of cancer out in the sides of the pelvis, toward the bladder and rectum, the cancer cells being killed with the heat, slough; and I have had one case in which two-thirds of the uterus sloughed because two-thirds of the uterus was cancerous. I had another case in which a large opening occurred between the bladder and the vagina because it was infiltrated with cancer tissue and sloughed out.

Dr. Fowler, Oklahoma City: I want to say just a word with regard to the laceration of the cervix. I think it is criminal for physicians to use methods of hasty delivery. I think that the present method of using pituitrin is something that the profession is going to be ashamed of. I know of cases where pituitrin has been given before the completion of the pains of labor and everybody who knows and has studied the action of pituitrin knows that every authority condemns the use of it before complete dilatation of the cervix. The second thing is the use of forceps. The same statement would apply. Anyone ought to know better than to apply forceps before the cervix is fully dilated. A third thing I want

to speak of is cases of dry labor. If you have a patient in this condition — if you bear down the abdomen and force the cervix with the head of the baby into the pelvis—you get a terrific laceration of the cervix. If you give the patient something to quiet her between pains until the proper dilatation, you get practically no laceration, but if you get in a hurry and use forceps, you get a terrific laceration, with the bad results that follow.

Dr. Gregg (closing): I wish to thank Dr. Andrews and the other doctors for the discussion of the paper. We certainly appreciate that an early diagnosis and an early diagnosis only is the only way to save our cancer cases. I believe with reference to the Percy method that it is only a matter of last resort. Anything to give hope. The men that I have seen using the Percy method practically always open the abdomen and do a thorough job while they are doing it. I have never used it, but we appreciate it is an extreme treatment. The matter of an hour or two at a time in using heat inside the abdomen and more or less handling of the tissues, of course, would carry with it a high mortality rate, and, as Dr. Blesh has said, there is always a sloughing where you have a death of tissue. Cancer is no exception. This rotting away that we have in these neglected, long-drawn-out cancer cases is something awful. One thing I wish to impress is to make an early diagnosis when your patients come to consult you and all of these cases can be cured and saved. This should be done and is the only way we can save them.

SURGEONS' VERSUS GENERAL PRACTITIONERS' VIEWPOINT OF GASTRIC DISTURBANCES.*

By **ROSS GROSSHART, M. D., Tulsa, Okla.**

The object of my paper today is not to introduce anything new but to bring more vividly before my medical brethren certain well-known facts which are often not given the cognizance they deserve. Also to stimulate discussion on certain phases which are still sub judice.

I will briefly outline the various causes of gastric disturbances and then classify them into surgical and medical, according to my views, limiting myself to the surgical cases.

We have those primarily gastric and those primarily extrinsic with secondary gastric manifestations. Under the first class we have the following affections:

Acute gastritis due to some irritative process varying in intensity from simple hyperemia to the phlegmonous type.

Chronic gastritis either as a result of the acute form or due to a prolonged low-grade irritation. In these cases we find a hypochlorhydria which may be so severe as to be an achlorhydria.

Achilia gastrica and atrophic gastritis are in reality end results of chronic gastritis, although some observers class them separately.

Functional hyperchlorhydria may be due to nervous strain, but more frequently to some extrinsic cause, as appendicitis, gall stones, et cetera.

Ulcers of stomach and duodenum are of unknown cause.

Hypochlorhydria usually found in chronic gastritis and cancer, but occasionally in gall stones and circulatory disturbances.

Cancer cause unknown but frequently found developing on base of old ulcer.

Syphilis of stomach, which may produce symptoms, due either to hyper or hypochlorhydria.

Pyloric stenosis due to adhesions from gall bladder or upper abdominal peritonitis, cancer, old ulcer and in infants the so-called functional form which in reality has an organic basis of hypertrophic musculature.

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Laennec's cirrhosis, giving as a rule a lowered acidity with occasional bleeding from the cardio-oesophageal venous plexus.

Acute infectious diseases causing a reflex vomiting, and occasionally an acute gastritis.

Anemias giving as a rule a hypochlorhydria.

Chlorosis often simulating ulcer.

Nephritis and cardiac decompensation by producing circulatory changes.

Appendicitis, gall stones, pelvic disorders by reflex, causing usually a hyperacidity.

Locomotor ataxia simulating gastric trouble during a crisis.

Brain tumors, cerebral syphilis and other central lesions by direct irritation of vomiting centre.

Of the above enumerated list some are distinctly medical and some surgical, while a few are border line cases. It is the surgical and border line cases which I intend to discuss.

The average general practitioner, given a case of some acute disease, will go any length to make a diagnosis, but when a patient comes to his office complaining of dyspepsia he will look at him, tell him to stick out his tongue, and dole out some rhubarb and soda, pepsin or I. Q. & S. and think he has earned his fee and done his full duty by the patient. The question as to what is the matter has not the slightest interest to him. The diagnosis of stomach disease is either of too little importance or is too difficult. In fact, the exact diagnosis is exceedingly important and as a rule comparatively easy. Moreover the earlier proper treatment is instituted the better the prognosis for a cure.

In carcinoma no one questions the advisability of operation at the earliest moment possible. In these cases it is a matter of diagnosis and in an operable stage it is sometimes rather difficult, as it does not give characteristic symptoms of achlorhydria, pyloric stenosis, bleeding and tumor formation. Any case of obscure stomach disorder in a person over 35 years of age, for which we cannot elicit a cause, should make us very suspicious of malignancy and an immediate resort had to test meals and the X-ray, and if still in doubt an exploratory laparotomy.

Pyloric obstruction is purely surgical and here the preoperative diagnosis is not necessary, as the nature of the trouble renders it immediately surgical.

In ulcer, the clean cut history of discomfort or pain in the epigastrium, nausea, belching, bloating and vomiting, with definite food relations, the point of epigastric tenderness, the relief by neutralization of stomach contents by food or alkalies or their removal by lavage or vomiting. These, in connection with the chemical findings of the test meals, usually suffice to make a clean cut diagnosis. The X-ray in these cases is also of great help. Occasionally a cancer developing on the base of an old ulcer will give us a very confusing picture, but given a case where there has been typical symptoms for a number of years, which are gradually changing and becoming confused, it is highly probable that we have a beginning cancer and an exploratory *laparotomy* should be performed.

In cholecystitis, cholangitis and cholelithiasis the diagnosis is somewhat more complicated. However, if strict attention is given to the symptomatology the case is usually quite clear. The pain or discomfort usually comes on quite suddenly, being excited in the majority of cases by a heavy meal. It is usually of a remittent character, oftentimes extending through to the back or up to the shoulder; is often accompanied by chilly sensations and ceases quite as suddenly as it commences. Nausea and bloating are very constant features, and occasionally vomiting which may last several days. The chemical findings in test meals are not constant but hyperchlorhydria predominates. There is an absence of the complete relief by removal of contents or their neutralization, which we find in ulcer. Usually gall bladder tenderness can be elicited by Murphy's method. At

present the X-ray is developing into one of our best means of differentiating from ulcer, as with the newer tubes the Roentgenologist is able to demonstrate stones in many cases. One point that must be kept in mind is that ulcer and stones are frequently found together.

In chronic appendicitis the distress is usually of a more constant character than gall stones and is epigastric. Hyperchlorhydria is a constant feature and appendiceal tenderness can always be elicited by Deaver's methods. There is frequently a history of a previous acute attack.

A purely nervous hyperchlorhydria is the main stumbling block and should never be diagnosed until ulcer, gall stones and appendicitis can be ruled out.

In women pelvic inflammation, ovarian trouble and retroversion are sometimes the cause of reflex disorders. It usually consists of a nauseated feeling which becomes worse during the menses and remits between. The diagnosis is made by elimination of other causes and the physical pelvic findings.

It is in the treatment of ulcers that the greatest division occurs, the medical men claiming good results and the surgeon disputing them. As Mark Twain has said: "There are lies, damn lies and statistics," and we all have to form our opinion more or less from personal observation. In a very large per cent of cases relief can be given by rest in bed, Lenhartz diet, belladonna and magnesium. However, if these cases are followed it will be found that the vast majority recur and keep on recurring with free intervals extending from a few months to years, until the patient is getting old and we find we have a case that does not respond to medical means and surgery has to be resorted to in a patient who has now become an exceedingly bad risk. In favor of surgery is the high per cent of cures, the low mortality when used early, and the lack of danger of cancer, perforation and hemorrhage. Cancer alone develops on the base of old gastric ulcers frequently enough to more than offset the mortality of operation.

Certain phases admit of no other treatment than surgical—that is, perforation, pyloric stenosis, hour-glass contraction and chronic bleeding.

As to gastro-enterostomy or gastro-enterostomy with pylorotomy or pyloric blocking, that is a purely surgical question which the surgeon has to decide in each case.

Cholecystitis, cholangitis and cholelithiasis are more and more becoming to be accepted as surgical diseases, but there are still many who believe they can be cured by medical measures. The numbers are legion—olive oil, Carlsbad salts, calomel and salts, are the old standbys. In cholangitis, when the inflammation is of a catarrhal character, by the administration of a brisk purgative we often get amelioration of symptoms but we are all familiar with these patients who return time after time with the same old symptoms of malaise, anorexia and slight jaundice. If we question them we find that they are all chronic dyspeptics. Sodium succinate was brought out a few years ago as a sure cure for biliary disorders, but it has been proven to be absolutely worthless. These diseases cannot be cured by medical means and to let them go without surgical intervention invites the direst results. A person with simple inflammation or stones may go on for years without any trouble besides the dyspepsia which will not yield to treatment. On the other hand you never know when a stone may block the cystic duct and give rise to an empyema of the gall bladder with all its dangers of gangrene and perforation. The stone may pass into the common duct and, lodging there, give rise to severe jaundice and oftentimes suppurative cholangitis with its exceedingly high mortality. Cancer of the gall bladder, ducts and head of the pancreas, due to chronic inflammatory processes produced by stones, occur frequently enough to far more than offset the mortality of operation. Another factor is that of an infected bladder or ducts being a chronic septic focus with all of its attending disasters, as has lately been shown by Billings and Rosenau.

The per cent of cures is exceedingly high when the proper operative pro-

cedures are instituted. Many of the failures in the past were due to drainage when the bladder should have been removed.

Appendicitis when recognized is always considered surgical and here is merely a question of diagnosis, as we all agree that a chronic appendix should come out.

Cancer and pyloric obstructions are, like appendicitis, considered surgical as soon as recognized.

My plea today is diagnosis. Do not let a chronic dyspeptic come to your office and go away without a diagnosis. Do not give them some rhubarb and soda or I. Q. & S. and tell them if they are not better to come back next week. Go over them, study them, take test meals, if necessary use the X-ray, make a diagnosis and if medical give them appropriate treatment; if surgical give them immediate surgical attention.

Keep in mind that the earlier an operation the less the mortality and the better the chance for a cure. Remember that cancer of the stomach, if taken early in its course, can be cured, but if let run soon becomes hopeless. That if a patient comes to you with obscure stomach symptoms and you dally along with him until the late symptoms of cancer appear, you are as responsible for his death as if you had stabbed him in the heart—really more so, for he comes to you as the one in whom he has confidence, and whom he can trust, and you, by your negligence, betray that trust and are guilty of his death.

Discussion

Dr. W. G. Lemmon, Tulsa: Mr. President: As has been previously stated, duodenal and gastric ulcer are readily relieved by medical treatment in the early stages, but all of you who have followed your cases know that they almost inevitably recur and keep recurring after medical treatment until a time comes when they do not respond to medical measures, or a pyloric stenosis or carcinoma develops and surgery becomes imperative. Gastro-enterostomy with excision does not give a high mortality when done in the early stages before the patient becomes debilitated from starvation or cancerous cachexia. One of the most pertinent aspects is not how grave is the operation alone but also what sort of a surgical risk is the patient. In considering the mortality from gastric surgery you must remember that the vast majority of this work is done on people of exceeding debility. Moreover, the danger of carcinoma developing on the base of an old ulcer more than offsets that of operation. As to simple gastro-enterostomy versus gastro-enterostomy plus pyloric blocking, I am strongly in favor of the former. In an experience of about seventy-five cases I have never seen a vicious circle follow the no-loop operation.

Carcinoma of the stomach is very often obscure and any case of indefinite stomach trouble in a person over the age of thirty-five should excite our suspicions of cancer and resort be made to the X-ray. If this does not definitely determine the condition, present resort should be made to an exploratory laparotomy.

I agree that there is no medical treatment of cholecystitis and cholelithiasis. Surgery is the only procedure that will cure these conditions. The medical men say that the trouble frequently returns after operation and we have to admit that it sometimes does so. With our newer knowledge of gall bladder pathology the percentage of cures is becoming much higher. Too many gall bladders were drained when they should have been removed. The operation of cholecystectomy in competent hands gives practically no higher mortality than cholecystostomy and in most cases the results are much better. At the present time I remove all bladders that show any change whatsoever in their walls, especially those where we have the thick, inspissated, tarry bile with no stones present. In this type the trouble almost invariably returns if the bladder is merely drained and the former practice of drainage of this class of cases is one of the main reasons why operation shows as high a per cent of recurrences as it does. The only place

we are justified in retaining a diseased bladder is where we have evidence of trouble that may lead to stenosis of the common duct, necessitating a cholecyst-enterostomy at a later period. Against my somewhat radical stand can be brought the argument that we are sacrificing an organ concerning whose function we are somewhat in doubt. However, the fact remains that our patients do as well without it as with; we are removing a diseased organ which certainly plays no part of great necessity in the body's economy and the number of our cures is much greater.

In closing I can only add to Dr. Grosshart's plea of diagnosis and immediate diagnosis in these maladies, for nowhere else is the old saw, "a stitch in time saves nine," more justified.

Dr. White, Muskogee: I want to emphasize one point and that is the question of diagnosis where locomotor ataxia is concerned. A tendency, I think, with that part of the medical profession which has been in practice for only a few years is to be in a hurry about making a diagnosis. When we first begin practicing, we feel that it is absolutely necessary to come to some very definite conclusion as to what is the matter with the patient on the first visit. Each year, however, we get a little more cautious and take a little more time in making our diagnoses. Recently I was very much impressed on this point by a patient whom I had seen off and on for about eight years and had frequent attacks of epigastric pain, nausea, vomiting and who was then suffering more or less with chronic digestive disturbance. When this patient first came to me I was under the impression that he had an ulcer and advised a laparotomy. This was refused. During the last year he was under my treatment for some time and had developed, in addition to the above symptoms, shooting pains in the abdomen and legs with very decided weakness of the lower extremities, difficulty in walking and loss of knee jerk but absence of Argyll-Robinson pupil. The latter, however, irregular in contour. I was then very glad that he did not accept my advice given some years previously, as I am convinced that this operation would not have proven satisfactory. The point I wish to emphasize is to take sufficient time to make a diagnosis of a case, whether it is one day or one week, and if you do not know what is the matter with patients, be sure you do not do anything to them that will do them harm.

Dr. Fishman, Oklahoma City: In one of his closing statements Dr. Grosshart spoke the keynote to all practitioners of medicine and surgery when he said that we must go over the patient to find out what is the matter with them and make a proper diagnosis. That is all there is to medicine and surgery because, with all due respects to our ability as medical men from a viewpoint of treatment, or surgeons from a viewpoint of operative technic, we cannot get results when we go after the wrong thing either surgically or medicinally. So that statement is a very fundamental one in the treatment of sick people and in spite of the fact that I have been told so often when I was to make a diagnosis and let the patients wait for a better diagnosis to be made that a patient don't want to be dilly-dallying around with examinations; they want some medicine. I still maintain that my idea is correct and patient will be benefitted by proper diagnosis.

Let's tarry awhile before we go and make up our minds about something definite concerning the patient before we give advice. That does not necessarily mean that we should let the patient suffer, nor it does not necessarily mean that we should let a disease go that is dangerously progressive, but it does mean that we must not be in a hurry to make our diagnosis and make statements until we are very sure what we are speaking about.

Take, for instance, the point of view of gastric ulcer. Gastric ulcer is a local disease, an ulceration of the mucous membrane of the stomach wall, and in eighty per cent of the cases the stomach wall shows local disease, but there are factors that have to do with other parts of the body and the trouble may be a blood vessel disturbance in the wall due to some disturbance of the supply to that blood vessel

or from some distant part. When we come back to diagnose and try to make a definite diagnosis we must not only say the patient has a gastric ulcer, but why? So we must look for the reason that causes gastric ulcer in that particular case. It may take some time, but we must be sure that the causes, if they can be determined, be removed, so that the patient becomes permanently cured. So, then, diagnosis means not only naming the disease but finding the factors that have to do with the cause of the disease and eradicate them from a point of view of prevention.

Dr. Grosshart (closing): I do not think I have anything to say in closing more than that I wanted to impress upon those here to make a diagnosis and be able, if not in a position to give treatment that is necessary, to separate the sheep from the goats and treat those that he is able to treat as a medical case, and those surgical to refer them to a surgeon who will give relief. Too often in my brief career I have seen patients that have traveled practically across the continent to see men of reputation who have given them something for relief but have overlooked the diagnosis, either because they did not give them the time or did not go over them carefully and keep in mind the conditions that cause the stomach symptoms. There are many, and there are very few conditions that affect the human race that has not some stomach reflex, and from that standpoint don't think that every time a man comes to your office that this is just a case of indigestion and push him out something. Go to the bottom of his case and try to give that man relief. This is doing him right, yourselves right and not lowering the profession in general or driving them to the chiropractor, the Christian Scientists and everything else.

GASTRIC ULCER PERFORATION FOLLOWED BY OPERATION TWELVE HOURS LATER AND RECOVERY.*

By **FRED S. CLINTON, M. D., Tulsa, Okla.**

J. T. H., white, male, age 32, traveling salesman, requested attention on account of sudden and severe abdominal pain about 11 p. m. Patient stated that present trouble began a number of years ago; that he experienced distress after eating, that many times the uneasiness and distension of stomach following eating would be actually painful in character until relieved by soda or some carbonated water. He lost weight by reason of restricted diet and irregular living incident to his vocation.

Patient stated that he had, just about an hour previous, eaten an enormous meal in an endeavor to satisfy a voracious appetite. Among other articles of diet, as proven by their physical evidence later on, were large quantities of radishes, onions, lettuce, peas, salad, olive oil, meat, etc. He began to feel his usual distress, so went to a soda fountain and drank two glasses of carbonated water, shortly after which he experienced a very severe pain in the upper abdominal region midway between the lower end of the sternum and the umbilicus near the median line. In the hope of relieving this he drank several glasses of soda fountain products which seemed to increase rather than relieve his distress.

Arriving about twenty minutes after the beginning of the severe pain, patient was found writhing in agony and tossing about on the bed suffering from severe abdominal pain. Features were distorted and the entire body bathed in profuse perspiration and marked evidences of shock. Marked abdominal rigidity with increased localized tenderness between the ziphoid appendix and umbilicus.

Radical operative procedure was immediately advised, but patient declined, stating that he had been advised to never submit to any operation. He was given hypodermics of morphine and atropin, hot applications locally, all fluids by mouth discontinued, and every effort made to secure his consent for removal to

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the hospital and operative attention, until twelve hours after present acute attack when he consented to be operated upon. He was cyanotic and when taken to the operating room had temperature of 100 3-5, pulse 90, respiration over 32, and abdomen enormously distended.

Under ether anesthesia. Right rectus incision. Large quantities of fluid accompanied by all manner of ingesta came out of the wound. The stomach and all of the intestines presented a bluish appearance. Search was made for the perforation which proved to be on the posterior aspect of the stomach, some distance from the pylorus and about the size of a lead pencil. Its closure was quite difficult and effected as follows: A purse string suture of linen was applied over which several Lembert sutures were made and then an omental patch was secured over the area. After this every particle of food that could be found was wiped out with wet gauze sponges. Large opening was made in the right kidney pocket and in the left loin and through this from above downward was poured large quantities of normal salt solution to mechanically cleanse the abdomen of the detritus. Wounds were closed with drainage in the three sites above mentioned and the patient put to bed in the exaggerated Fowler position, given usual attention, morphine sufficient to control severe pain, camphorated oil and proctoclysis and no food by the mouth for several days.

After many stormy scenes, during which the temperature did not go high but pulse up to 120, patient was gradually placed on a fluid diet and the marked acidity controlled by mixture of equal parts of bismuth subnitrate and calcined magnesia plus 20 per cent bicarbonate of soda. Of this mixture a scant teaspoonful was administered four times daily.

Patient was dismissed from the hospital forty-five days after admission in comparatively good condition, has resumed his occupation and when last heard from, about six months after the operation, was comfortable, seemed in good health and had gained forty pounds. His diet at that time consisted largely of malted milk and cream, although he thought he could eat solid food but said he was doing so well on that diet he did not care to change it or have a gastroenterostomy performed.

Discussion.

Dr. McLain Rogers, Clinton: Mr. Chairman and Gentlemen: I have not been fortunate enough to get my cases even twelve hours after perforation. In my personal experience for the past year or two patients have come to me forty, fifty and sixty hours after perforation and I was always fortunate enough to see these patients out and gone in short time but not well. There is no question but in this condition it is imperative to see the patient early and operate at once.

Dr. Blesh, Oklahoma City: Mr. Chairman, I just wish to call particular attention to one fact in Dr. Clinton's paper that is an important feature from a diagnostic standpoint. That has to do with the fact that this patient had this perforation immediately following the ingestion of carbonated drinks. It is so common a test to apply to the stomach that we frequently forget the dangers that might come of that very thing. It is so frequently the case to give a solution of sodium bicarbonate and tartaric acid a very common test. It is a common, almost daily occurrence. Here we see the results of giving such a medicine in a case on the verge of perforation. The rapid dilatation of the stomach with the gas injection caused perforation.

I had my experience with perforating ulcer of the duodenum and stomach in three cases. How many cases I had and did not operate or diagnose, I do not know. One was on the person of a physician and I saw him some twelve hours after perforation and operated and he recovered. This physician had given no previous history of ulcer of the duodenum. The second case was a patient who had given a history of stomach ulcer of many years duration.

I was called to him several hours after perforation and also was fortunate in saving his life. The third case was a young man. I did not make the diagnosis until after I entered the abdomen. He was young man of sixteen or seventeen years of age. Fortunately he also recovered.

Dr Clinton (closing): I thank you for the consideration.

RADICAL TREATMENT AND CURE FOR EPIDIDYMITIS, ACUTE, SUB-ACUTE AND CHRONIC.*

By W. J. WALLACE, Ph. G., M. D., Oklahoma City, Okla.

Associate Professor of Genito-Urinary Diseases and Syphilis, University of Oklahoma School of Medicine

From an etiological standpoint several things may cause this condition, viz: Urethral instrumentation, trauma and infectious diseases, but the object of this paper is to describe the radical treatment of epididymitis produced by gonococcal infection.

Gonococcal epididymitis is always due to the extension of the infection from the posterior urethra to the epididymis.

Pathology. The seminal vesicles, the ampulla of the vas deferens and the vas become congested and thickening takes place; a large number of leucocytes emigrate from the dilated blood vessels and are intermixed with gonococci. There is a discharge of epithelium, mucus and pus. The mucous membrane is infiltrated and contains a large number of connective tissue cells; by extension the globus minor the first part of the epididymis is attached and becomes increased in size; next the body, and then the globus major, or head, and the ducts of the epididymis become swollen, infiltrated and contain mucus, pus and desquamated epithelial cells.

In all forms of epididymitis and epididymo-orchitis of this origin there is a slight effusion into the tunica vaginalis, and between the tunica albuginea and the visceral layer of the tunica vaginalis, distending this space, or the cul-de-sac, between the enlarged, swollen, and congested head of the epididymis and the testicle proper; or, in other words, you have here an encysted hydrocele. The cellular tissue of the scrotum is also infiltrated, congested and thickened with serous effusion, causing marked swelling, about two or three times its normal size.

In nearly every case there is intense pain, following the course of the vas, and especially so in the groin, due to the congestion of the vas; also pain in the supra-pubic region, due to pressure on the under surface of the trigonum by the enlarged and congested vesicles and ampullae; also with pressure and consequent irritation the terminal ends of the ureters. Hence we have marked reflex pain over the kidneys, with fever and other constitutional symptoms.

In describing the operation for this pathology (epididymitis and epididymo-orchitis), we will say frankly that so far as the operation is concerned there is nothing new in the technique; but the condition for which it is done has given some startling and almost unbelievable results.

The operation is very similar to Jaboulet's operation for hydrocele. The incision is made well up above the head of the epididymis, going through skin, dartos and fascia, down to the tunica vaginalis communis, which is well separated from the fascia. This is done by obtaining the line of cleavage, and with gauze around the finger entirely loosening the whole tunica vaginalis communis from surrounding tissue. The testicle with sac is then lifted out of the scrotum, and the incision made into the tunica vaginalis through the inner layer, the encysted fluid allowed to escape, and edges picked up with artery forceps; the incision then enlarged with scissors to the proper size and tunica layers everted. And

*Read in Surgical Section Oklahoma State Medical Association, May 10, 1916.

here is where we find the most serious results of the inflammation, numerous bands of adhesions around the head and tails of the epididymis. Many times the tunica albuginea and visceral layer of tunica vaginalis propria are adhered over considerable areas. These adhesions are broken up in the same way as mentioned above, by obtaining the line of cleavage and separating the two layers, and breaking the fibrous bands by blunt dissection. The tunica vaginalis is then turned back, and if necessary the redundancy cut away, and one or two sutures taken, thus obliterating the sac.

It has been our custom in these conditions, with intense inflammations, to use small quantities of sterile vaseline or sterile oil about the testicle and epididymis before replacing in the scrotal sac. The mass is then replaced, using extreme care not to have torsion, and the wound closed in the usual manner.

Indications. We have done this operation in all stages of acute epididymitis from the beginning of the inflammatory process on through to the stage of decline, and here we wish to emphasize the point that the sooner the operation is done the better, because few or no adhesions have formed, and adhesions have done little or no harm, and consequently your work is simplified, also there is no after pain. In something over sixty cases we have never had a patient complain of pain after the operation. The patient makes a rapid recovery and is up and around in a few days.

In chronic epididymitis it is indicated because of the fact that adhesions are numerous, the visceral layer firmly grown to the tunica albuginea, and numerous fibrous bands around the head and tail of the epididymis, thus cutting off the blood supply and nutrition to the seminiferous tubules which, of course, renders the testicle of that side functionless so far as propagation of the species is concerned and, of course, if both sides are affected the individual is, in a majority of cases, sterile.

In acute exacerbations of a chronic case it is, of course, indicated for the same reason as acute epididymitis..

Results. Relief of pain is absolute and immediate and as stated above, we have never had any pain after this operation. The intense twisting, aching pain in the groin and back has never made its appearance after the anaesthetic. Fever and all constitutional symptoms are relieved at once.

Recurrence. Up to this time none, and we feel safe in saying that such will be the case, as the sac and adhesion have been destroyed.

Restoration of Function. If testicle is properly replaced without torsion, all adhesions broken, and blood supply intact, then there is a direct line of communication. The function and procreative power in practically all acute cases, and a majority of chronic, is restored.

SECOND-HAND SURGERY.

By W. W. JACKSON, M. D., Vinita, Okla.

It is with a peculiar sense of loss that a surgeon whose work has been confined to the operating-room of a modern hospital approaches his first operation undertaken amid the facilities offered by the average home.

He has been accustomed to having everything prepared for him by someone else. Linen sterilized, water sterilized and cooled, solutions prepared, likewise the patient, a skilled anaesthetist and a trained assistant, a fumigated room and a good light. He arrives in the home to find nothing prepared, the patient unshaved, the room carpeted, curtained, and littered with furniture and odd junk, and all the light to be had coming from small windows. He is accompanied by the internist who refers the case, who naturally is a poor ether anaesthetist, as he uses nothing but chloroform in his practice and the majority of

that in obstetrics, and a trained nurse who, with limited operating-room experience, must act as assistant. With this equipment he is expected to get results which will compare favorably with his amphitheater record and generally does.

I will take up here a few of the factors which make for success in dealing with this "second-hand" work with "second-hand" equipment. It will be found a decided advantage to sterilize materials in the office rather than depend on a fire that is never too hot in the home of the patient for this service. The linens, gauze, towels, etc., can be placed in a compact package, two pillow casings making an excellent covering, and sterilized, and need never be touched again until opened by the nurse at the time of operation. Incidentally this will shorten up the time of operation about three hours, besides the certainty that your materials are really sterile.

A point in technique which was discovered by accident is the superiority of any ordinary laundry-soap over the so-called "surgical" soap in scrubbing up. It is impossible, of course, to carry "green-soap" in this type of work. The laundry soaps, such as "White Russian," etc., are superior, as they all contain free alkali and consequently are decidedly germicidal. Incidentally they are not at all detrimental to a tender skin as is often claimed.

I am strong for the use of iodine as a sterilizing agent for the skin. It is better, however, in 1-3 strength, that is, the official tincture diluted three times with grain alcohol. This will be found to be as efficient as the full strength and will not produce the dermatitis that the full strength frequently does. A 5 per cent solution of thymol has practically the same value as iodine, but is open to the objection of its odor, and being colorless does not define the aseptic field as does the iodine.

One of the common disadvantages under which one is forced to work in country practice is a lack of cold, sterile water. This may be overcome by using the water in which the instruments are boiled, diluted to the proper temperature with ordinary clean well or hydrant water. To this is added cresol compound to make 2 per cent solution. This is allowed to stand ten minutes before using and may then be placed in the abdomen, if occasion arises, without question, as it is impossible by culture to obtain any bacterial growth from it.

The more I see of this type of work the more I doubt the existence in any operation, regardless of the surroundings, of absolute "surgical asepsis". It is impossible to rid the skin of the staphylococcus albus by any method of procedure. I have repeatedly, in hospital service, taken cultures of this type from abdomens which were considered to be thoroughly prepared by prolonged scrubbing with soap, water, bichloride and alcohol. Tincture iodine and thymol are the best of any form of cleansing, as they do succeed in sealing the constant germ inhabitants in the deeper levels and the major share of this is probably accomplished by the coagulating properties of the alcohol.

What is more vital, there is not one surgeon in fifty the technique of who's staff is so absolute that he or they do not at some time in the course of a laparotomy flagrantly violate some principle of asepsis. Obviously we must then rely upon some form of *antiseptic*, the nature of which each surgeon determines out of his personal experience. Personally I am much prejudiced in favor of the solutions of the cresol and naphthalene series. Their co-efficient is in general about three relative to Phenol, and their toxicity very low, particularly those formed on the open ring. In infections with B. Coli, I do not believe that they have any equal. Bichloride I regard as practically useless in the solution ordinarily used—and worse than that, dangerous from the chance of absorption. It is absolutely contraindicated if one uses iodine on the skin as it precipitates in the form of the red iodine of Hg. and causes a violent dermatitis.

It is the practice of some to use a solution of tincture iodine in water as an

antiseptic. This is obviously at fault, as any alcoholic solution is precipitated on the addition of water. The result is simply a weak solution of alcohol with all the iodine in the reddish-brown precipitate in the bottom of the pan. The solution is practically negative, iodine being soluble in water in the ratio of 1-5000. One grain of iodine to 50 ounces of water has no bactericidal power at all.

Another advantage is the use of the skin-clip in preference to the suture in any form. First, for the eradication of the possibility of stitch abscess, as the clip does not penetrate the skin, and consequently an infection cannot travel along it as is the case with any form of stitch. Second, the speed with which they can be applied, and the painlessness with which they are removed, which makes a decided difference to the patient. Third, no stitch holes along the incision looking like a snake-track in the dust.

This paper is directed especially to the men who undertake major surgery in the private home and is intended primarily to invite discussion; for the problem of the development of "100 per cent" technique in this "second-hand" type of work is of absorbing interest to us to whom it is a matter of rule.

ACUTE INFECTIVE OSTEOMYELITIS.*

By J. J. DIAL, M. D., Muskogee, Okla.

This lesion until recently has not been thoroughly and generally understood. Traumatic osteomyelitis following compound fractures and gunshot injuries of bones has been recognized for a long time as a distinct and serious wound complication. Active inflammation in bone occurring independently of an external wound and consequently direct hematogenous infection, however, has become one of the most interesting among the lesions of surgical pathology.

A suppurative inflammation of the marrow of the bone, the long bones near their ends, either in the hollow canal or in the cancellous tissue in the expanded extremities (most common site), almost invariably spreads first in the direction of least resistance and by continuity of tissue (the marrow), hence in a single day often produces disaster to the entire shaft of the bone affected.

There are anatomical reasons for this special location of osteomyelitis: First: It is an exceedingly frequent affection in children and young adults; seldom met with after the skeleton has become fully developed. Second: In the young the ends of the long bones during their growth are supplied with new and imperfectly developed capillary vessels, also in this medullary tissue their caliber is four times greater than the vessels that supply them.

Another important anatomical condition mentioned by Senn, predisposing to localization of microbes in this tissue is, these small blood vessels are without vessel walls and are more like channels or excavations than blood vessels. These peculiar structural conditions favor blood stasis and mural implantation of infected leucocytes under the action and exciting cause.

We now know that pus microbes inhabit persons in perfect health but do not cause diseases as long as the circulation remains normal, but if in such a person the circulation in the medullary tissues is disturbed suddenly in consequence of a sudden or prolonged exposure of the surface of the body to cold, congestion, mural implantation and localization of the floating pus microbes in a locality where anatomical structures offer the least resistance; in such an emergency it is only too often in such exposures in the young that we have developed spontaneous acute osteomyelitis.

The pathology and location of acute osteomyelitis, a definite knowledge of the pathology and a proper early analysis of the symptoms will save us from making

*Read before Muskogee County Medical Society June 13, 1916

a wrong diagnosis and not confound this dreadful malady with rheumatism, tuberculosis and typhoid fever, as has been frequently done.

"Symptoms are only expressions of pathological changes, and the interpretation of symptoms into their definite pathological entities is the 'Ultima Thule' in the practice of medicine." The interpretation of the early symptoms and a correct diagnosis in a case of osteomyelitis is as important as would be in an attack of fulminating appendicitis, or a gangrenous appendix. The only difference would be in the latter, the fatal results (death to the patient, perhaps), in the form, loss of, or a more or less crippled limb for life.

I believe it is just as easy to diagnose acute infective osteomyelitis in the first twenty-four hours as it is to diagnose the average case of appendicitis. The attack comes on suddenly with a chill (sometimes with a prodromic severe headache for a day, with other slight feeling of illness); following the chill we have high fever, great pain in the limb with complete loss of function; the pain a severe pressure pain; a boring pain. It is in the neighborhood of a joint, not in the joint, and it is of a boring character. The patient is intensely ill. They dread to be touched or moved because the slightest movement of the limb greatly aggravates the pain. The swelling comes on in a few days. It is not an early symptom at all and is not present as an early symptom, why? Because the infection is confined within that unyielding bony wall and periosteum and the tissues outside of that are not infected. Not until such time as the pus comes out of the bone and spreads along the outer surface beneath the periosteum, and then for the first time there is local swelling and a sensitiveness to superficial pressure.

Deep, firm pressure continued for a few seconds will elicit pain just over site of infection earlier, and is of great importance in making an early diagnosis. The elevation of temperature is the expression of the absorption of the products of infection and occurs very early in osteomyelitis because the pus is under such a great tension. For the same reason is the pain so intense the first few days of attack.

The treatment of this disease from the earliest moment that a diagnosis can be made is eminently a surgical one. As in cases of suppuration in the abdominal cavity, pus must be removed before it has an opportunity to effect serious or fatal injury.

The lesson that we must learn from the clinical history of every case of acute infection osteomyelitis is that it begins with a chill. They have severe pain, generally definite in location, usually near a joint, never associated with an acute joint effusion, and therein we differentiate it from the arthritides called rheumatism or metastatic arthritis.

If we are going to be of real service to the patient we must open the pus cavity inside of thirty-six hours and probably inside of twenty-four hours. We can make a differential diagnosis of the location of the process if we carefully observe the symptoms, clinical course and physical signs and can avoid destruction of the bone, with the subsequent deformities of the limb and the ankylosis of the joint which occurs so often following infection of this kind.

In conclusion I say with emphasis that no operation which does not include an opening into the bone should be regarded as dependable and complete.



A MULE IN THE INTESTINAL TRACT.
(See article, page 248.)

A MULE IN THE INTESTINAL TRACT.*

By CHAS. W. HEITZMAN, M. D., Muskogee, Okla.

June 21, 1916, W. J. S., age 19 months, was brought to my office suffering from a colitis. June 30, I received a telephone call asking that I visit him during the day; a half hour or so later I was asked not to delay my visit but to come at once, that in addition to his other troubles he had swallowed an iron horse. Upon my arrival at his home I was told that he had been playing with a metal horse fully an inch long and equipped with ears, legs, etc., and that he had put this object in his mouth and during an attempt to remove the horse he had swallowed it. From the description given me of the horse I did not believe it possible for the child to have swallowed it and insisted on strict search being made for it. This was done with negative results. I then asked that a radiograph be made of the parts to determine the presence of the foreign substance. This was not carried out. Next day, July 1, I received a communication over the phone that he was not doing very well and I was asked to suggest further treatment. I again insisted that an X-ray be made. This was finally agreed to and the picture made on the afternoon of the same day. The accompanying radiograph shows the location of the animal presumably about the head of the caecum. I suggested immediate operative procedure. Again I was voted down. Next afternoon, July 2, I was summoned by phone, statement being made that the young man was suffering intensely and was endeavoring to have a bowel movement but the attempts were unsuccessful. On my arrival at the scene of inaction I made a digital examination of the bowel and felt what appeared to be the animal in question. I introduced a pair of fenestrated forceps and was able to deliver the animal which proved to be a mule. (See accompanying picture). The point of interest, outside of the fact that this is perhaps the first case on record wherein a human being was delivered of a mule, is the rapid transit that this foreign substance made through an apparently empty intestinal tract and the lack of injury. The child made an uneventful recovery.

MEDICAL MAXIMS.

The common conditions with which rheumatism is confused are: gout, arthritis deformans, septic arthritis and the multiple secondary arthritis which follows gonorrhea, scarlatina, dysentery or cerebro-spinal meningitis.

Chills in typhoid fever are always distressing, and one of the following causes should be sought: 1. In some instances it may be normal. 2. Malaria or pneumonia may also be present. 3. Thrombosis of a vein may show itself in this way. 4. Hemorrhage or perforation, which we fear most, may be responsible. 5. Even constipation may cause a chill in typhoid fever. 6. Relapses often begin in this way.

Typhoid fever is often mistaken for malaria, pyemia, acute miliary tuberculosis, tuberculosis of the peritoneum, and tubercular meningitis. Although paratyphoid fever is due to a different bacillus, it is difficult to differentiate it from true typhoid. The symptoms, however, are milder, while positive blood cultures clinch the diagnosis.

Typical gastric ulcer symptoms are often secondary to chronic appendicitis.

Emphysema of the hypertrophic variety is usually the sequela of whooping cough, asthma and chronic bronchitis.

The chief complications of diabetes mellitus are boils and carbuncles, coma, sepsis and gangrene.—Medical Review of Reviews.

*Report to Muskogee Academy of Medicine.

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Local news of possible interest to the medical profession, notes on removals, changes in address, deaths and weddings will be gratefully received.

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EDITORIAL

THE CHIROPRACTIC QUESTION IN OKLAHOMA.

This would not concern us except for the fact that soon we are to elect almost an entire new set of legislators and the body will hardly be apprised of their election before the pernicious lobby maintained by this set of so-called scientists will be at their perennial occupation of button-holing the members and by flimsy and crude reasoning attempt to win them over to the idea of a law creating a separate board of examiners. The medical profession cares not a whit either, as a rule, what the individual members of this aggregation do to those who can think and act for themselves, but the profession knows that only the intelligent physician is able by years of training to see through the shams and pretensions of this collection of alleged scientists and for that reason holds it a duty to the people it serves to call the attention of the law makers to what the claims of Chiropractic really amount to in order that they may serve the function of protecting that portion of the population who have not opportunity for acquainting themselves with the facts in the matter. This question concerns the Oklahoma Medical Profession as citizens aside from professional interest. The profession would not care so much about the matter if it did not believe that giving Chiropractics a separate board of examiners, instead of merging them all into one head as other diverse schools of medicine have been, would result in turning loose on the people a class of practitioners illy fitted, if fitted at all, to cope with the problems scientific judges, aside from our profession, believe confronts those who hold themselves to the public as physicians.

Chiropractic Beliefs:

In order to get at the matter and give our people a clear understanding of the matter we will cite some of the ideas of Chiropractic leaders, their so-called authorities, as showing their attitude on educational and healing matters in general; the quotations are from Chiropractic publications, issued by authority of those supposed to know.

From Annual Announcement No. 2, Palmer School of Chiropractic.

A representation of a tree is shown, beside it a spinal column.

"Pliers are shown as pinching a limb, also the nerves which convey the functions to the stomach. *Chiropractors assert that this pressure causes ninety-five per cent of all diseases.*" * * * *

"The causes of disease has been and is yet a mystery to the great mass of humanity. Chiropractic has solved the mystery; it is now now easily understood * * * * the only mystery is that it remained unsolved so long."

"The old ideas, that the cause of disease is outside of man still prevails among most schools of healing, and the cure is in finding something, which by introduction into the body of the sufferer will drive the disease out."

"The Chiropractic does not utilize surgery, in fact denies the necessity for such in all pathological cases."

Useless studies:

"We do not waste valuable time in observing healthy and morbid tissue under the microscope * * * *. Students save time and money by omitting these useless studies."

"All cancers, tumors, asthma, appendicitis, deafness, catarrh, * * * * have one common cause, namely—impinged nerves."

"Chiropractic: A new method * * *, etc. W. J. Robbins, D. C., * * * Sault Ste. Marie, Mich. * * * *."

The list comprises nearly one hundred diseases including asthma, cancer, consumption, smallpox, typhoid and under the list "This is only a small portion of the diseases we adjust for."

From Chiropractic Facts:

"Away with drugs and the knife; Chiropractic adjustments make it possible to cure all diseases."

On peril of appearing tiresome we will attempt some suggestions on the above noted propaganda:

A Chiropractor may be treating by adjustment a case of typhoid; we know the usual run of these cases is very similar, but occasionally we have a patient who suddenly screams with pain, his face becomes blanched, pulse barely discoverable, body cold and covered with perspiration, abdomen hard and so stiff that it cannot be depressed by the finger. We know this patient has suddenly suffered a perforation of the intestine; we know there is only one remedy and that must be used at once if life is to be saved. The abdomen must be opened and the opening in the intestine, caused by the existing ulcer eating through, must be closed; the patient must be supported by strychnine, camphorated oil, alcohol and morphine. What a plight of helplessness would this find our Chiropractic healer in. He does not even own or know how to use a hypodermic syringe and medicines by the mouth are the most dangerous at this time.

Suppose a man is found in a profound stupor, evidences of morphine poisoning are about, the symptoms bear the theory out; at least two things must be done to save this life, and done at once; the stomach must be filled with a neutralizing solution, through a tube, for the man cannot swallow and the contents withdrawn, an emetic must be given, and again the hypodermic is used. Just what impinged nerve would our Chiropractic release in this case?

Untreated Hudson River water recently overflowed into the city supply at Albany, in just time for bacteria of typhoid to grow in the intestine; about 150 cases developed, all among those who had not been protected by the vaccination administered by the Regular Medical Profession. The cases ceased new development exactly after the water supply was treated by the chemicals (drugs) of the Regular Profession. Just what impinged nerve caused this mysterious outbreak, will our Chiropractic answer?

A child eats some poisoned food and immediately has convulsions; like the morphine case the stomach must be emptied, the child is unconscious, chloroform is the only thing that will relieve it. Just what nerve would our Chiropractic release in that case?

Does the cause of disease exist outside of the body or is it caused by nerve impingement? A child is born of a mother infected with gonorrhoea; unless the eyes are sterilized at once after birth, we know the sight is liable to be wholly lost, the victim added to thousands of his fellows. Just what nerve impingement infected the baby's eyes?

A child enters a home where measles exist. What impingement produces the disease in the little visitor a few days later?

An unvaccinated person (the Chiropractic has no use for vaccination) goes to a place where smallpox exists; with him goes one protected by vaccination; the first man takes the disease, the second does not. What impingement existed in the unvaccinated?

Our American Army is scattered along the Mexican border and in Mexico. Why is it they have no smallpox or typhoid, yet all around them it exists in the civilian population? Is there a thinking man so unreasonable as to conclude that impinged nerves produce it in one set of people, while in people all around them in like conditions it does not produce it? The answer to this is obvious.

A man enters a swamp; after a few days he suffers from a fever, we call it malaria. What impingement produced that trouble? Why does not the White man, Arab or Indian of the desert, where there are no swamps, contract the disease? Is it possible impingement occurs only in lowlands where there are mosquitoes, yet does not occur in highlands where there are none?

American Red Cross Surgeons cleaned up Serbia with chemicals calculated to remove vermin from the bodies of the people. Estimates place the number treated at a million. Just what impingement did they relieve in order to immediately check typhus fever as they did?

Chiropractic advertisement—Muskogee:

"A child in this city had diphtheria; antitoxin was administered, paralysis resulted. Hundreds of children are being inoculated and having their health impaired by this irrational treatment."

We cannot conceive of anything more ignorant or criminal, more dangerous to innocent children than the Muskogee advertisement, "A child in this city had diphtheria; antitoxin was administered, paralysis resulted." How many ignorant fathers and mothers on reading that would be prompted to refuse the physician the right to use antitoxin? How many of them would know that the result implied as a sequence of administration of antitoxin was the most vicious untruth born either of ignorance or meanness? As a matter of fact, in "Diseases of the Pharynx," etc., written by Sir Morrell Mackenzie, many years ago before antitoxin was discovered, under "Paralysis of the Throat," the following language occurs: "The affection which is a frequent sequel of diphtheria and occasionally met with after common angina," etc.; "Diphtheritic paralysis of the palate is a common sequel of membranous sore throat."

Physicians have known for years before antitoxin was ever heard of that paralysis of the throat was not uncommon with diphtheria. *That type of paralysis is today successfully treated with antitoxin*, so at a glance may be seen the destructive influence on people who cannot judge of such matters of such a vicious unpardonable advertisement. It also shows the fallacy of turning loose on the public a sect who will preach such ignorant and dangerous doctrine.

Chiropractics are practicing medicine:

In order to judge the right of Chiropractics to be licensed or refused license,

our legislators must know what the term "practice of medicine" means. The medical profession contends, and we believe rightly, that the practice of chiropractic is the practice of medicine, and supportive of this contention may be cited some of the various definitions of the term by authorities:

"Medicine is the healing art; physic; a science the object of which is the cure of disease and the preservation of health." Dunglison.

"Medicine is the science and art of preserving health and of preventing and curing disease." Gould.

"Medicine, a subject of one of the learned professions, includes as it now stands, a wide range of scientific knowledge and practical skill. The science of medicine is the theory of disease and its remedies." Encyclopedia Britannica.

If chiropractics propose to do any of these things above noted, they are certainly proposing to practice medicine without reference to the means they employ to attain the end, without regard to the specious claims made that they are not amenable simply because they use no drugs but "adjust" for diseased conditions.

Chiropractic is the practice of medicine. This has been held by several state supreme courts, notwithstanding the cheap sophistry and juggling to evade the questions at issue. Illustrative of this the reader is referred to:

State vs. Miller (Iowa), 124 N. W.; Same vs. Corwin, 131 N. W.;

State vs. Johnson (Kan.), 114 Pac.; also to other Kansas decisions;

Missouri, State vs. Smith, 223 Mo.; Rhode Island, Swartz vs. Sivey, have with uniformity upheld this contention. The Iowa court says:

"These acts were taken as showing that he was engaged in the practice of medicine. The system by which one *professes* to heal is immaterial."

The Kansas court says:

"* * * * and should be held to cover the case of one who *not claiming* to be a physician and surgeon really practices osteopathy under another guise, *without having even the qualifications of the osteopath.*"

The Rhode Island court says:

"A Chiropractor who professes to adjust the spinal column for the purpose of removing the cause of a person's physical disability is guilty under the *ordinary acceptance* and the popular meaning of the term 'practice of medicine.'"

In Oklahoma the Chiropractics want a separate board of examiners, they are not content as the Osteopaths are with a board examining them in the fundamentals of medicine and their own members to examine them in their materia medica. Obviously they want the right to organize schools in order to turn out graduates to practice on our citizenship in machine like order. To them long years of study before approaching the sacred human person with their adjusting experiments is not necessary; a short time in college and they are to be free to go out among the people and do all possible damage by commission or omission. Called by any name or concealed by any verbiage, their calling is the practice of medicine. Without legal recognition they are already known as and accept the title of, and proclaim to our people the word "doctor" as indicative of their profession.

Bragg vs. State, 134 Alabama.

"* * * * while it is true as we have said above, there have always existed differences among physicians as to therapeutic measures to be employed in the treatment of diseases, yet it has never been supposed that the disciples of any particular school of the healing art were physicians—practitioners of medicine—and those of different school or sect were not. *They*

have all been regarded by eminent scholars as engaged in the practice of medicine."

Davidson vs. Bohlman, 37 Mo.

"* * * * the statutes restricting the right to practice medicine to registered physicians and surgeons * * * . It is not necessary to administer internal remedies, in order to practice medicine within the meaning of the statutes, which prohibits," etc.

Teem vs. State (No. 3933), Court of Criminal Appeals, Texas, March 1, 1916.

1. Physicians and Surgeons. "Practicing Medicine"—What Constitutes.

"Accused, who was a Chiropractor, held himself out as being able by adjusting the bodies of his patients to enable them to throw off disease, but sedulously refrained from calling his operations treatments, and notified his patients that he was not a doctor or physician. Pen. Code, 1911, Art. 750, declares that it shall be unlawful for anyone to practice medicine in any of its branches upon human beings, who has not registered * * * * * . Held, that accused, who collected fees for his so-called adjustments * * * * was guilty of *practicing medicine* without a license."

Bragg vs. State, 135 Alabama.

"Is there anything in the language of the statutes which prevents giving to the word "medicine" its legitimate technical use or meaning? This question can best be answered by tracing the history of the legislation on the subject, culminating in the present statutes. Before doing so, however, we should bring to mind the purpose of these enactments, and constantly keep before us that *the legislative purpose was to protect the public against charlatanism, ignorance and quackery.*"

Smith vs. Lane, 24 Hun. (N. Y.), 632, discussing another case, the court says:

"We are of the opinion * * * * when we find, as in this case, a defendant holding himself out by signed card as a doctor, with office hours, who talks of his patients and gives treatments * * * * and *who asserts the power to cure all diseases that any physician can cure without drugs, and also diseases that they cannot cure with drugs, * * * we must hold that he comes within the purview of the Statute prohibiting the practice of medicine.*"

These are ideas expressed by learned courts and show the result of their studies from the standpoint of non-medical minds, presumably actuated in following the law and interpreting it properly. Are we not to conclude that if the doing of these things enumerated is practicing medicine in New York or Michigan, that the same acts constitute the practice in Oklahoma?

A phase of the matter possibly not considered by some of our lawmakers is this: nearly all states now, and have for a long time, required entrants to medical colleges to be possessed of at least a minimum amount of literary qualification before entering; this is a result of the knowledge that a mastery of the science in all its intricacies cannot be had unless a person is prepared to properly study and appreciate the problems before him and those that will continuously confront him in after life, unless he is well grounded in the fundamentals of allied sciences. After this qualification has been shown the applicant is further required to study a minimum term of years, with a certain number of months devoted to the study in each year; he must then qualify for a diploma by examination, after which he may appear before a state board of medical examiners and if passed by the board he may offer to treat, heal and advise the sick. The minimum time required for passage through medical colleges in all of the United States is now four years, while many require five, some an added internship in a hospital before finally entering practice.

The medical profession does not object to any system of treatment a sane practitioner may use, *if he has qualified as above noted*. Our profession has found that the above course of study is necessary to a proper understanding of the principles involved in treating, healing and advising the sick, and we may be pardoned for questioning the intelligence and ability of one who proposes to cover all of the same broad ground by merely scratching the surface. We believe most thoughtful men will agree with that questioning on our part. They will agree that fifty men who have studied mechanical or civil engineering four years know more about the subject than fifty who have only studied one year; they will, as a rule, consult the four year lawyer before they will the one year lawyer, and following these conclusions we believe they will agree if one set of men has found it necessary to study four years to master a subject, it is reasonable to assume that another set must do the same.

We respectfully point out that every advance in prevention of disease by sanitation, hygiene or administration of preventive medicines and remedies has been brought from darkness by physicians who have been thoroughly prepared to study their problems and have mastered them for the benefit of all mankind. In this connection we point to the knowledge gained by physicians and latterly its free distribution to everyone on the cause, prevention and control of malaria, yellow fever, typhoid, childbed fever, epidemic meningitis, diphtheria, smallpox, syphilis, and venereal disease generally, and others not here necessary to mention.

We state these accomplishments as the common knowledge of all moderately informed physicians who have come to take them as a matter of course rather than a matter of pride and self congratulation.

We further point out that our troops in Mexico are not afflicted with typhoid and smallpox, though the diseases exist all about them. Malaria and yellow fever have gone from our Canal Zone to all practical intents, yet those diseases are ever present in the adjacent countries. American Sanitarians cleaned Cuba and Porto Rico. Of all these achievements the Chiropractor has not advanced one iota of help or suggested one. In the smallpox cases in Choctaw County January, 1912, a Chiropractic physician, not protected by the vaccination of the medical profession, contracted the disease and died. The memory of Oklahoma man runneth not back to the time when a regular physician protected in his beliefs by his vaccination died; if one contracted the disease, he would be a curiosity.

We submit that great damage is done people by failure to appreciate diseased condition from which they suffer, *early* enough to prevent its ravages and that an immature knowledge applied to such cases is often more damaging than none, in that the person is falsely lulled to security until too late for relief.

The Oklahoma Medical Profession submits to our Legislature these observations:

1. All persons who propose to assume the function of healer, treator, or advisor of the sick should be qualified to all reasonable degrees.

2. They should be required to master the fundamentals of what the human body has, that is, anatomy, physiology, chemistry, bacteriology, pathology, physical diagnoses, medical jurisprudence, toxicology, disease peculiar to women and surgery.

3. They should carry on the great principle already widely inculcated by the medical profession of the world, that prevention is greater than cure and more beneficial to mankind as a saving of the human economy otherwise worn and wasted by disease.

We submit a profession studious at all times during the past many scores of years, awake to the pressing needs of mankind, is in better position to judge the qualifications pertaining to that profession, even to the smallest detail, than is one who simply asserts a proposition is the truth, without the ability to show by the severest tests that it is the truth, to impartial observers competent to pass on the questions.

We further submit that the history of nearly all cults proposing to supercede medicine as this one does is only a memory to be found in musty pages of the past, never amounting to more than passing hysteria of the moment; that legalizing them will be a direct injury to helpless people who are unable to discriminate and that the hour of their legalization will have hardly passed until some other equally fallacious sect will appear and demand the same recognition for their alleged "science."

We submit that human life in Oklahoma has the right to demand that it have every possible protection accorded it by requiring all who assume control for the time to show⁴ their ability by the severest reasonable tests.

THE CAUSE OF EPILEPSY.*

Charles A. L. Reed, in a recent report, seems to have marshalled all the necessary facts deducing that epilepsy is due to the bacillus of epilepsy. Under his direction systematic examination of the blood, contents of the cecum, appendix and adjacent lymphatics was made, the examination disclosing in the products of the epileptic the bacillus, while it was never present in the non-epileptic.

It has been noted for sometime that constipation was a leading factor accompanying the disease; **that meat diets were especially liable to produce recurrence of attacks before in abeyance and that the dietary was the important consideration in treatment. Surgical operation and treatment looking to the correction of organic defects with an accompanying proper dietary have produced cures.

Reed shows from his observation that the bacillus is a spore-bearing organism, found as above noted; that it is subject to culture; that introduction of the growth in salt solution in the veins of rabbits produced a similar condition in those animals, from which the bacillus was in turn recoverable; that ingestion of the product by rabbits produced the same condition, all such dying with epileptic seizures. Some of the animals infected by venous injection spontaneously recovered, after which the bacillus was not demonstrable. He also notes cases in which surgical correction of abnormal fecal currents has been followed by gradual decline of the symptoms and this not followed by other treatment. His conclusions are:

Epilepsy is an infection produced by the bacillus epilepticus; it invades the system through the alimentary canal; that by reason of its spore-bearing capacity, and without appropriate treatment it has the power to indefinitely perpetuate itself in both serum and blood; in certain cases there seems to be ability to overcome the infection by natural immunity, but only where there is no intestinal focus for continued infection of the system; and that the treatment to be effective must be surgical and bactericidal addressed to the organism with reference to arresting the intake from the intestine and neutralization and eradication from the blood.

The possibility of physicians or nurses becoming infected by contact is strongly exemplified in the history of two cases, both physicians, otherwise healthy, who gave a history of personally treating their cases by administering enemas a short time before their seizures.

*Journal A. M. A., Vol. LXVI, No. 21

**Thomson, Clinical Medicine.

THE CANCER PROBLEM.

This Journal, and probably all others in the country, has received from Cyrus L. Topliff, New York, who adds "Scientific American" as his right to speak

on the subject, the following communication enclosed with what seems to be a reprint from that publication:

"This brief article contains all that is officially known about cancer, up to the present time.

"It is intended as a suggestion to physicians, and others, to change their present line of thought in regard to this disease, and make a careful study of the mind, and its relations with the body.

"If fear, worry, hate, spite, jealousy, and all irritating thoughts, were entirely eliminated from the mind, then cancer, and all inflammatory forms of disease, would probably not develop in the body; and cases where the disease is already present, if not too far advanced, could, no doubt, be cured.

"If people could be led to think on these lines, more curative results would follow, not only in the treatment of cancer, but in all other forms of disease."

The California Journal sacrilegiously questions the "scientific" claim, also the "science" of the American permitting it.

The suggestion to stop worrying is very good as a general proposition for everyone to strive toward, but Mr. Topliff will pardon us for suggesting that entire abstinence from all fluids for, let us say, four weeks will be equally efficacious; the abstainer after that time will positively not contract cancer or any other known disease. We do not want to disregard advice either, but we suggest the shoemaker to his last, the butcher to his block, the farmer to his plow, ad infinitum.

IF YOU ARE SUED.

Please remember the following sections from the warranties previously called to your attention:

(5) No member will be defended in any matter, the cause of which may arise during the time he is not a member in good standing, or during a lapse in his membership.

(7) Whenever practical, and it is deemed expedient by the Committee having the Medical Defense in charge, counsel suggested by the member being sued will be employed.****

(8) I. Members shall make a complete written statement of every detail concerning the case and forward the same to the Secretary of this Association *immediately on receiving information that he has been or is about to be sued.*

III. No employment of counsel, settlement of any expense or any expenditures may be made without authority from the Medical Defense Committee or its executive officers.

AMES, CHAMBERS, LOWE AND RICHARDSON, YOUR ATTORNEYS.

The Medical Defense Committee, after much consideration of the matter, has secured the services of the above named firm to look after the interests of our members.

While this firm is most favorably known to a large number of physicians of the State, it is not out of place here to say for the benefit of those who may not know them or of them, that the reputation of none is higher; their ability is of the upstanding type sometimes equalled, but certainly not excelled, and we may rest assured that our affairs are in good hands.

Our membership is urged to remember that in co-operation only may we hope for success in the handling of the matters with which this firm is concerned; consequently the individual physician is urged to conduct his

cases in such a manner that they may not reflect on his brother physician and incidentally bring the profession into disrepute.

ARE YOUR FRACTURES X-RAYED?

Several state societies having medical defense features have initiated a ruling refusing defense to a member sued on account of a fracture if the diagnosis and condition was not clearly understood by X-Ray of the injury. This, when practicable, seems fair enough. No class of injury is so deceptive as fracture; the sprained ankle, weeks getting well, is often a fracture; the same applies to other so-called "sprains," treated by massage, liniments, etc., only to turn up later as fractures and walking reproaches to our negligence. We cannot afford to neglect this feature now—if we do, we may be the cause of our association having to spend money contributed by other physicians, defending a suit that might not have been had we taken what is now considered the proper and usual precautions for the protection of our patients.

PERSONAL AND GENERAL NEWS

Dr. R. S. Willard, Brock, has located in Ardmore.

Dr. W. L. Short, Cordell, has moved to Frederick.

Dr. C. V. Rice, Muskogee, visited the Pittsburg clinics in June.

Dr. O. W. Wilson has moved from New Castle, Texas, to Hollis.

Dr. Andrew Struble has moved from Pauls Valley to Petersburg, Ill.

Dr. E. B. Dunlap, Lawton, has been assigned to the Ft. Sill hospital.

Dr. James C. Johnstone, of Lawton, it is said, will locate in Blackwell.

Dr. J. L. Blakemore, Muskogee, drove his automobile to Virginia in July.

Dr. A. J. Hays, Frederick, has been doing post-graduate work in Chicago.

Dr. A. E. Carder, Coweta, is attempting to organize a rifle club at that point.

Dr. R. Mooney and family of Henryetta are taking an automobile trip to Oregon.

Dr. A. F. Padberg and family, Canton, are making an automobile tour of Colorado.

Dr. M. M. DeArmon, Mangum, has returned from post graduate work in Chicago.

Dr. M. Howard, Oklahoma City, has been appointed on the medical staff O. N. G.

Dr. A. A. West, Guthrie, Lieutenant O. N. G. Medical Department, has resigned.

Dr. C. J. Fishman, Oklahoma City, visited the Chicago and Rochester clinics in June.

Dr. E. Brent Mitchell, was recently operated on at the Southwestern Hospital, Lawton.

Dr. L. A. Milne, Lawton, has been ordered to join the medical reserve corps at Ft. Sam Houston.

Dr. J. E. Muller, Snyder, is in Ft. Sam Houston on temporary assignment with the medical reserve corps.

Dr. J. M. Key, Tulsa, has been arrested in that place charged with violating the Harrison anti-narcotic law.

Dr. M. A. Jones and Miss Irene Mershon were married recently in Walters, where they will make their home.

The Durant Sanitarium was recently opened under the management of Dr. J. L. Shuler. Mrs. Max Case is the superintendent.

Dr. George McLean, Oklahoma City, has been commissioned by the Governor with the medical department of the First Oklahoma Regiment.

Dr. John A. Haynie, Aylesworth, was recently severely injured when he was assaulted by a Dr. Dickerson. It is said Dr. Haynie was struck from behind and is suffering from concussion.

Hobart's new city and county hospital was recently opened to the public with eight business and professional men as directors. Drs. Alex Barkley and A. L. Wagoner are managers and Miss Helen Carson, Superintendent. The Medical staff is composed of Drs. Barkley, Wagoner, G. W. Stewart, J. R. Dale, H. C. Lloyd and J. M. Bonham.

Dr. Francis M. Barnes, Jr., St. Louis, associate in psychiatry in Washington University Medical School, has become associated with Dr. H. S. Atkins as Medical Director of the Glenwood Sanatorium, but will retain his offices in the Humboldt Building for private work. Plans are drawn for a new addition to the Glenwood Sanatorium. When completed this addition will have accommodations for twenty-six patients, the administration offices and hydrotherapeutic rooms.

Dr. W. H. Cooley, Chelsea, has moved to Sareta, Texas.

Dr. Ney Neel and family, Mangum, are visiting Colorado.

Dr. H. K. Speed, Sayre, is doing special work in New York.

Dr. Earnest Sullivan, Maysville, has moved to Pauls Valley.

Dr. H. A. Kiles, Konowa, visited his old home in Ohio in July.

Dr. Porter Norton, Mangum, is spending his vacation in the Ozarks.

Dr. Orange Starr has been appointed City Physician at Drumwright.

Dr. A. J. Jeter, Foss, spent a month in Chicago post-graduate schools.

Dr. and Mrs. C. Z. Wiley and daughter, Tulsa, are motoring in Colorado.

Dr. Geo. H. Wetzel, Sapulpa, has been doing post-graduate work in Louisville.

Dr. J. I. Gaston, who has been in Dallas for some time, has returned to Madill.

Dr. and Mrs. G. F. Woodring, Bartlesville, are spending the summer in Colorado.

Dr. and Mrs. Edward F. Davis, Oklahoma City, are spending the summer in Canada and on the Lakes.

Dr. H. C. La Reau, Tulsa, who was recently operated upon for appendicitis, has fully recovered.

Dr. and Mrs. J. S. Little, Minco, visited New York in June and July. Dr. Little attended the Polyclinic.

Dr. R. F. Von Cannon, Miami, is doing eye, ear, nose and throat work in New York, Boston and Philadelphia.

Infantile Paralysis has been reported from Greer County by Dr. G. F. Border, health officer, reporting two cases.

Dr. and Mrs. A. H. Bungardt, Cordell, have returned from the Detroit meeting, visiting Kansas City while away.

Dr. and Mrs. W. Eugene Dixon, Oklahoma City, are summering in Estes Park, Colorado, driving through in their machine.

Dr. C. B. Hill, Supply, announces that the State Hospital at that place will soon have two additional fire-proof ward buildings.

Drs. J. W. Craig and W. W. Jackson, Vinita, are making an extended visit to the clinics of Chicago, Rochester, Detroit and Seattle.

Drs. A. A. West and A. J. Hedgecock, Guthrie, have formed a partnership for the practice of surgery and consultation and diagnosis.

Dr. E. E. Rice, Shawnee, returned from Detroit in a new machine. Of the 1600 miles covered, the worst roads encountered were in Oklahoma.

Dr. Charles W. Caldwell, Chelsea, has been placed under arrest for failure to report various matters to the County Superintendent of Public Health.

Hubert L. Bolen, Collector of Internal Revenue, announces that about 4,000 "medical men" have applied for registration under the Harrison Narcotic Law.

Dr. J. W. Bone, Sapulpa, who has never recovered from a serious illness of several months, is reported to be in a serious condition in Eldorado Springs, Mo.

Attorney General Freeling, it is said, has ruled that Chiropractics are subject to examination at the hands of the State Board if they are doing the work of Osteopaths.

Dr. F. M. Sanger, Oklahoma City, narrowly escaped death when the elevator in his office building suddenly descended as he was leaving the car. One leg was badly bruised.

Dr. L. J. Moorman, Oklahoma City, will spend most of July and August in Colorado, looking into the tubercular sanitariums of that state, after which he will visit the Pacific Northwest.

The State Board of Medical Examiners, at a recent organization, elected LeRoy Bonnell, Chickasha, President; Ben L. Denison, Garvin, Vice-President, and R. V. Smith, Tulsa, Secretary.

Dr. L. A. Hahn, Guthrie, who lost a case of instruments in May by theft from his machine, has recovered them. The thief, a negro, carried them to Purcell, selling them to a negro physician.

Dr. and Mrs. Melvin Fry, Drumwright, made an automobile trip to Cincinnati, where Dr. Fry took some post-graduate work in the Cincinnati hospitals. The bad roads were found in Oklahoma.

Dr. Fowler Border, Mayor of Mangum, after a long fight with the Mangum Gas and Electric Company, has succeeded in securing an order from the Corporation Commission reducing rates from 20 to 30 per cent on service of all character.

Oklahoma Physicians who have joined the First Infantry medical department are

assigned in the following order: Major F. H. Racer, Lieutenant C. S. Wallace, Lieutenant W. P. Lipscomb, Lieutenant M. S. Howard, Lieutenant Geo. D. McLean, Regimental Infirmary; Major Lloyd J. Bolend, Captain Lewis E. Inman, Captain Rex G. Bolend, Lieutenant Frank B. Sorgatz, Lieutenant Albert C. Hirshfield, Lieutenant Jesse M. Pemberton, Field Hospital.

Civilian Medical Resources of the country will be mobilized and grouped for future possible use by a National Committee of Eminent American physicians. The Committee has selected in each state a sub-committee who will, in turn, report their findings to the National Committee. The selection for Oklahoma is: F. H. Clark, Chairman; C. R. Hume, President State Medical Association during incumbency; C. A. Thompson, Secretary State Medical Association during incumbency; W. D. Berry, A. L. Blesh, L. H. Buxton, W. E. Dicken, Horace Reed, Ralph Smith.

Muskogee has firmly established itself as the real undisputed "highbrow" city of the State Oklahoma City, Tulsa, Guthrie and Enid may think they are in that class, but that is only their vain dream, for Muskogee has demonstrated that it needs more for library support than for all public health activities combined; more appropriation is needed according to estimates of city officials to the excise board, for librarians and assistants, and up-keep than are needed for city superintendent, physicians and inspectors, hospital care of indigents, drugs, chemicals, operating room expense and care of city detention camp. The estimate includes \$1,500 for building, the total for the year being something over \$6,000, while the library needs demanded some more than that. You "would-be's" in the way of cities, take notice. Muskogee looks after her mental equipment. She does.

COUNTY SOCIETIES

The McIntosh Medical Society met in Eufaula July 11 with the following program. "Iritis," W. B. Newton, Muskogee; "Infantile Diarrhoea," general discussion; Clinic-Case reports.

The Western Oklahoma Medical Society met in Clinton, June 28. They held the following program. "Rational Therapeutics," C. J. McBurney, Clinton; "Autointoxication," C. W. Tedrowe, Elk City; Early Diagnosis of Tuberculosis with charts and demonstrations, L. J. Moorman, Oklahoma City; Paper, E. S. Ferguson, Oklahoma City. Immediately after the program, the following officers were elected: J. W. Kerley, president; C. J. Tisdal, vice-president; W. I. Winberly and J. J. Williams, censors. The next meeting of the association will be held in Elk City in September.

The Southwestern Medical Society met in Lawton July 11. The following was the announced program: Clinic by Drs. E. B. Mitchell and G. Pinnell. Address, Senator J. Elmer Thomas, Lawton; Duodenal Ulcers and Their Surgical Treatment, Dr. Jackson Broshear, Lawton; Military Preparedness from Medical Standpoint, Major Halloran, U. S. A., Ft. Sill, Okla.; The Acute Abdomen, Dr. D. A. Myers, Lawton; Pelagra, Dr. L. A. Mitchell, Frederick. After the program, an automobile trip was taken through Ft. Sill, and a visit made to the camp of the Oklahoma National Guard. A motor trip was made to Hyle's Hole for lunch and about 150 physicians and guests were served, after which there was a dance at Medicine Park.

CORRESPONDENCE AND MISCELLANEOUS

THE ATTORNEY GENERAL ON CHIROPRACTIC.

Oklahoma City, July 8, 1916.

Mr. W. T. Salmon,
418 State National Bank Building,
City.

Dear Sir:

Receipt is acknowledged of your letter of the 7th instant, asking whether or not chiropractors are violating the law by treating the sick without first securing a certificate from the State Board of Medical Examiners. You state in your letter that they treat all forms of diseases and evade the law by stating that they do not treat diseases but treat conditions and render a bill for labor instead of medical services.

The question must be answered in the affirmative. Section 6895, of Chapter 67, Article 7, Vol. 2, Revised Laws of Oklahoma, define the credentials and examinations necessary for the practice of medicine and surgery within this state. According to this section osteopathy is recognized and osteopaths are made subject practically to all the regulations and requirements of regular physicians. They are required to take the same examination on the same subjects as regular practitioners and must file a diploma from a legally chartered college of osteopathy in good repute as such, having a course of instruction, requiring actual attendance thereon, of three years of nine months each.

As I understand it chiropractic is described by the dictionaries as a drugless method of treating diseases, chiefly by manipulation of the spinal column, and osteopathy proceeding upon the belief that disease is a result of improper adjustment of the human mechanism, treats the disease by manipulation of the imperfectly adjusted parts by hands made skillful by learning and practice. Both systems contend that the maladjustment of the parts of the human body results in what is termed disease and both assume to correct the adjustment by manipulation of the hands. The chiropractor contends that his method is superior to that of the osteopath, while the osteopath contends that chiropractic is but a counterfeit imitation of osteopathy.

Be this as it may, the osteopath introduced his profession into this state prior to the advent of the chiropractic and the legislature has definitely and specifically recognized it as a method of the treatment of diseases and the word "osteopathy" has a definite legal meaning. If the chiropractic is doing the work of the osteopath, if he is treating diseases by the method of manipulation of the hands, then it is necessary that he comply with the law as provided for those practicing medicine, surgery and osteopathy as defined in Section 6895, *supra*. To do so without having thus complied with the provisions of the law is in my judgment a clear violation of the statutes of this state.

Holding, therefore, that all persons who are now practicing chiropractic in this state without having complied with the law regulating the practice of osteopathy are doing so in violation of the law, we feel that it is the duty of the county attorneys to take such action as will uphold the law of the state.

Very truly,

S. P. FREELING,
Attorney General.

INFANTILE PARALYSIS.

From the Oklahoma State Board of Health, Guthrie, Oklahoma.

Dr. John W. Duke, Commissioner.

The unprecedented ravages of infantile paralysis in New York City, as well as outbreaks of the dread disease in other sections of the country, have caused something of a panic in the mind of the general public. As far as Oklahoma is concerned, while precautions should be taken, there is not the slightest cause for panic. There has not been a case reported up to date within the borders of the state. Precautions are being taken by the State Board of Health to deal with any emergency which might arise, but the actual danger is not considered great.

As a matter of fact the dread inspired by infantile paralysis is all out of proportion to the actual number of its victims. Tuberculosis, typhoid, diphtheria, many other diseases are far greater scourges. But infantile paralysis strikes at the youngest and weakest class in the community, it often strikes with deadly swiftness, there is danger of some permanent disability resulting from the disease, above all it is a disease which to a considerable degree has mystified modern science. For all these reasons it inspires, especially among mothers, a terror which is scarcely justified by facts and conditions.

Disease and Treatment.

Put in simplest terms, the condition known as infantile paralysis is the result of an attack by an organism or minute parasite on the contents of the spinal cord, into which the parasite makes its way. The spinal cord becomes filled with blood and the sensory and motor cells, as they are called, become disorganized and broken. Partial paralysis and too often death may result.

It is known that the disease is caused by this minute organism; it is known that infection can be conveyed by the stable fly, as well as by transmission from person to person; but treatment of the disease with any certainty is a problem which has baffled medical science. It was reported a few days ago that a New York physician had discovered a cure for the disease. It is to be hoped that this is true, but so far the claim has not been definitely established.

In the treatment of the disease the following measures are recommended: The patient should be isolated as completely as possible in a clean, bare room, well screened to keep out insects. Visiting should be forbidden and only the necessary attendant should be allowed to come in contact with the patient. All discharges, including sputum, nasal secretions, urine and feces should be thoroughly disinfected, and special care should be taken that cups, spoons, remnants of food, etc., which may have become contaminated by the patient, are burned, scalded or otherwise purified.

Towels, bed linen and other fabrics should be boiled or dipped into a germicidal solution strong enough to destroy the bacillus. The nurse and physician should

observe the same precautions regarding their hands and clothing that they would in other dangerous contagious diseases.

The period during which the isolation should be maintained cannot be definitely stated. Children are usually not permitted to return to school for at least three weeks, but if the chronic carriers play the important role now suspected this time is in many instances far too short.

Precautions to Be Taken.

Whatever the mode of transmission, there is no question as to the infectiousness of the disease. Should there be an outbreak of infantile paralysis in Oklahoma the best precaution to be observed would be to keep the children, especially infants, away from places where they might be exposed to infection. Where there is the least question of doubt children should be kept out of school. Moving picture shows, theatres, and even churches should be avoided in a district where the epidemic exists. Where there is any reason to suspect a patient is suffering from infantile paralysis a physician should be called in as quickly as possible, since the progress of the disease is always swift and too often deadly. During its progress medical science can alleviate much suffering, even when a cure is not possible. By proper treatment permanent after effects often can be averted. Limbs that are paralyzed or semi-paralyzed often can be restored. In this connection it has been demonstrated that over-exercise of affected muscles is likely to be more dangerous than too little exercise.

POLIOMYELITIS—INFANTILE PARALYSIS

Reports from New York indicate that that city is making desperate efforts to check a beginning epidemic of anterior poliomyelitis, probably the most severe in its onset of any that has threatened American communities. In the summer and fall of 1913 several groups of cases of this disease appeared in California. The field investigations were carried on by Sawyer, who determined once more that this disease is transmitted by contact. It was impossible to show any connection between the stable fly—formerly incriminated—and the cases which he observed. In practically every instance infection could be explained on the theory that epidemic poliomyelitis is transmitted through contact from acute cases or carriers. He showed also that the active virus may leave the body from the rectum as well as from the nose and mouth. Precautions should be taken therefore, in the care of poliomyelitis patients to prevent infection, not only from the nasal and buccal discharges, but also from the feces and soiled bedding. Recently Flexner summarized his views as to the etiology of this condition. The microbic agent, he states, is present in the nasal and buccal secretions, carried by persons, not insects, and communicated by them in such a manner as to gain access to the upper respiratory mucous membranes of other persons. Those who are susceptible to the injurious action of the virus acquire the infection and develop the disease. Not all of them develop the paralytic or meningitic type. Some represent abortive and ambulatory types. All however, become potential agents for the dissemination of the virus, as do also healthy persons who have been in intimate contact with those who are ill and others who have recovered from acute attacks of the disease. The prevention of such dissemination is the actual prevention of the disease. The treatment of the condition is at best unsatisfactory, and the restoration of function to paralyzed limbs is a difficult task. A review of the subject appears in *The Journal of the American Medical Association* for July 8, 1916, p. 118. To repeat, prevention of this dangerous and crippling disease should be the primary object.—*Jour. A. M. A.*

A VALUABLE NEW CATALOGUE

Parke, Davis & Co. announce the publication of their 1916 price list, which is said to be an improvement in many respects over any previous issue of this valuable catalogue. The book is divided into three parts: Part 1—Fluid Extracts, Pills, Elixirs, Syrups, Tablets, etc. Part 2—Specialties, into which have been merged Special Preparations; Part 3—Biological Products. The nomenclature of the U. S. P., Ninth Revision, has been adopted in the new list, the term "milliliter" ("mil") being substituted for the cumbersome "cubic centimeter." The standards of the new U. S. P. applying to fluid, solid and powdered extracts and tinctures, together with the doses, have also been adopted. All Harrison-act items (products that must be ordered on official order forms,) are clearly distinguished. Its amplitude, its handy classification, its comprehensive general index, all serve to make the new catalogue a reference book of the utmost value to medical practitioners. We understand that the book will be ready for distribution about August 1st. Physicians are advised to write for a copy, addressing their requests to Parke, Davis & Co., Detroit, Michigan.

THE SCHOOL FOR THE BLIND.

The School for the Blind, located at Muskogee, Oklahoma, closed its eighth session May 24th. There were enrolled this year 108, and several were graduated from the Industrial Department of the Institution. Young men left the School for the Blind in May, trained to tune and otherwise repair pianos and organs, and they go forth to creditably earn a living and in doing so, to render valuable service to

society. The State erected a new dormitory this year which will accommodate thirty-six more students. The State provides tuition and board for blind children and the School's Superintendent, O. W. Stewart, wishes the name and address of every blind boy or girl in Oklahoma that he may furnish information to the blind and their parents concerning the institution for the sightless. The law governing the admission of persons to the School permits the reception of those but partially blind if the impairment of vision prevents the person attending the public schools. If you know and are interested in any one wholly or partially blind, write to Superintendent O. W. Stewart, Muskogee, Oklahoma, for a catalog and information.

LEGAL DECISIONS EFFECTING PHYSICIANS

WORKMEN'S COMPENSATION AND MALPRACTICE SUITS.

A Washington laborer, not satisfied with the award given him by the State Industrial Commission, filed suit against the doctor in the case for malpractice; the jury awarding the plaintiff \$1.00. A new trial was ordered, the defendant appealing from the order. The Supreme Court has this to say about the case. We hope the rule will be followed in Oklahoma:

"Clearly the purpose of the act was to end all litigation growing out of, incident to or resulting from the primary injury and, in lieu thereof, give to the workman one recovery in the way of certain compensation and to make the charge upon the contributing industries alone. That purpose is made reasonably clear by reference to the act.

"As a further confirmation of the theory that the legislature intended to remove the matter of injuries to workmen 'in all its phases' from the law courts, it will be noticed (Sec. 5 h and Sec. 120) that the legislature was careful to provide that the compensation allowed may be readjusted, if aggravation of disability takes place or be discovered after the rate of compensation shall have been established and if circumstances so warrant may be increased or rearranged.

"Surgical treatment is an incident to every case of injury or accident and is covered as a part of the subject treated. By the law the commission is given authority (Sec. 24, 4) to 'supervise the medical and surgical and hospital treatment to the extent that the same may be in all cases suitable and wholesome.' When a workman is hurt and removed to a hospital or is put under the care of a surgeon, he is still, within every intendment of the law, in the course of his employment and a charge upon the industry and so continues as long as his disability continues.

"The law is grounded upon the theory of insurance against the consequence of accidents. The question is not whether an injured workman can recover against any particular person, but rather is his condition so directly or proximately attributable to his employment as to invoke the benevolent design of the state.

"In construing statutes courts have always looked to possible consequences as an efficient aid in clearing doubts. It surely was not the intention of the legislature to leave it to the commission to apportion the compensation allowed by the state with some fancied judgment that might be rendered in a potential suit brought against the attending physician, or to encourage a settlement for a lesser sum than the amount really due by holding out the hope or suggestion that the claimant had a cause of action against a surgeon."—Washington Supreme Court Decision.

—Abstract Iowa State Medical Journal.

X-RAY PLATES MUST BE IDENTIFIED BEFORE ADMITTED TO EVIDENCE.

7493—Bartlesville Zinc Co. v. L. H. Fisher. Rogers County. Reversed and remanded. Opinion by Rittenhouse, C.

Before X-Ray plates are admissible in evidence, they must be identified and their accuracy established.

THE LAW AND THE EVIDENCE IN PERSONAL INJURY SUIT.

6638—C., R. I. & P. Ry. Co. v. Emmett Rogers. Stephens county. Affirmed. Opinion by Davis, C.

* * * * The plaintiff was advised by Mr. Brady, the claim agent, that the physician of the company had reported the injury as merely a skin wound and that it was not permanent. He was advised by Dr. Tye and Dr. Border, physicians of the

company, that the injury was merely a skin wound and not permanent. He was advised by Dr. Tye that he would have a good leg and would be able to perform labor to the extent and in the capacity he did prior to the injury. The plaintiff was a mere employe of the company. He had no knowledge of medical science. He could not judge of the effect of a burn as to its permanency or its temporary character. He relied upon the statements of the company's physician to the effect that he would have a good leg and believing and relying upon such statement, executed the release in question. In such cases innocent misrepresentations made in good faith and under an honest belief at the time made that they are true, on the one hand, and relied and acted upon in good faith and under an honest belief of their truth, on the other hand.

FUTURE PAIN WHEN INJURY IS OBJECTIVE—WHEN SUBJECTIVE.

5001—Muskogee Elec. Trac. Co. v. Clarence O. Doss. Muskogee county. Reversed and remanded. Opinion by Crump, C.

1. The jury, in a personal injury case, may take into consideration, in assessing the damage, the pain and suffering which may reasonably be expected in the future, provided evidence has been presented tending to show that the person injured will, with reasonable certainty, experience future pain as a result of the injury. 2. (a) If the injury is objective, and it is plainly apparent, from the nature of the injury that the injured person must of necessity undergo pain and suffering in the future, the jury may infer that fact from proof of such an injury alone. (b) But where the injury is subjective, then, to warrant a jury to return a verdict for future pain and suffering, there must be produced evidence by expert witnesses that the plaintiff, with reasonable certainty, will experience future pain and suffering as a result of the injury.

PROPAGANDA FOR REFORM.

Vaccine Treatment.—Hektoen (Jour. A. M. A., May 20, 1916, p. 1591) traces the stages by which vaccines, which were first employed with attempted scientific control, have come into indiscriminate and unrestrained use, with no guide beyond the statements which commercial vaccine makers are pleased to furnish with their wares. Already most physicians are realizing that the many claims made for vaccines are not borne out by facts, and that judging from practical results there is something fundamentally wrong with the method as at present so widely practiced. As clearly shown by Hektoen, "the simple fact is that we have no reliable evidence to show that vaccines, as used commonly, have the uniformly prompt and specific curative effects proclaimed by optimistic enthusiasts and especially by certain vaccine makers, who manifestly have not been safe guides to the principles of successful and rational therapeutics." (Jour. A. M. A., May 20, 1916, p. 1625.)

English Prescriptions.—Bernhard Fantus, professor of pharmacology and therapeutics, University of Illinois School of Medicine, favors the abandonment of so-called "Latin" prescription. He holds that the usual arguments in favor of the "Latin" prescription are fallacious and points out the advantages of the use of English. He concludes: "By far the most important reason for writing prescriptions in English lies in the difficulty medical students have in learning the Latin form. To the student prescription writing is a bugbear. When one thinks of the crowded medical curriculum and the comparatively small number of hours set aside for pharmacology and therapeutics, it seems a pity to waste any of it on the acquiring of an antiquated form of expression." In regard to the claim that Latin prescriptions guard a patient from knowledge which might be prejudicial, he replies: "Inasmuch as it is the popular opinion that doctors use Latin in prescription writing to keep the laity in ignorance for selfish ends, it seems high time that we antagonize this idea; and we can do this most emphatically by using English. This we can also do with perfect safety, for secrecy is very rarely, if ever, essential in the practice of the up-to-date physician, who generally prefers to take his patient into his confidence than to keep him in ignorance. Deception is not practiced by the true physician. Therein lies the special difference between the quack and the honest medical man." (Jour. A. M. A., May 27, 1916, p. 1696.)

Ichthyol.—The American agent for ichthyol—the sole importer—announces that his supply of ichthyol is exhausted. As fraudulent substitutes are offered for sale, this state of affairs should be known known to physicians. (Jour. A. M. A., May 27, 1916, p. 1734.)

Nonspecific Treatment of Disease.—Evidence is accumulating that certain therapeutic effects ascribed to specific treatment with vaccines or serums, have been due to nonspecific effects produced by these preparations. Jobling and Peterson (Jour. A. M. A., June 3, 1916, p. 1734) review the evidence along these lines. They conclude that too much reliance has been given to the idea of specificity and that we have refused to consider evidence of nonspecific therapeutic results. We should, however, not cast aside all ideas of specificity in disease, a conception which has been the foundation of vaccine therapy. Miller and Lusk (Jour. A. M. A., June 3, 1916, p. 1756) in a paper dealing with one phase of nonspecific therapy, report improvement in cases suffering from arthritis following intravenous injection of typhoid vaccine. It would be of interest to know how permanent the improve-

ment was and in how many cases the cause of the arthritis was found and removed. Also, we must bear in mind the query of Theobald Smith: How much energy does a reaction of this sort cost the patient, and is the final result worth the cost? (Jour. A. M. A., June 3, 1916, p. 1784).

A Case of Beta-Eucain Poisoning.—T. G. Orr, Kansas City, Mo., reports a case of beta-eucain poisoning. Toxic symptoms appeared after an operation in which 3 ounces of a 0.25 per cent. beta-eucain hydrochloride was used for the local anesthesia. After the toxic symptoms have completely disappeared, the patient died suddenly five days later. Necropsy showed an embolus in the left coronary artery. (Jour. A. M. A., June 10, 1916, p. 1857).

Efficiency and Nontoxicity of "Arsenobenzol."—Udo J. Wile, Ann Arbor, Mich. reports that during the last six months 612 injections of "Arsenobenzol" from the Philadelphia Polyclinic have been administered at the University of Michigan Hospital. Wile concludes that the immediate therapeutic results from the use of Arsenobenzol are fully as good as those following the use of Salvarsan and that, given with proper precaution, the drug has shown itself fully as little toxic as Salvarsan. The conclusions refer to intraspinal medication as well as to intravenous. (Jour. A. M. A., June 10, 1916, p. 1880)

ABSTRACTS AND REVIEWS

CONDUCTED BY

DRS. L. F. WATSON AND L. J. MOORMAN, OKLAHOMA CITY,
AND FRED J. WILKEMEYER, MUSKOGEE

Dr. W. F. Fowler, Rochester, N. Y., writing in Surgery, Gynecology and Obstetrics, July, 1916, very exhaustively treats on the literature concerning the vermiform appendix. A brief summary of the important points of his paper can not but be of interest to every physician.

He states that recent embryologic studies of folds, bands and kinks have demonstrated that various malpositions of the appendix are dependent upon partial or non-rotation of the gut. Clinically it is frequently found that in children the caecum and appendix have not reached the iliac fossa, but have become delayed in their descent or are situated near the umbilical region. Appendicitis in the young is commonly atypical, and it is necessary to rely on the generality that acute abdominal disease in children is probably appendicitis. Other causes of malposition of the appendix in the adult are an abnormally long mesocolon and an unusually long appendix which may reach to the left side.

The physiology of the appendix is meager but considerable has been added to our knowledge of the subject in the past two years. Heile found that the musculature of the appendicular region and of the appendix itself act together to insure perfect peristalsis. The walls of the appendix secrete tryptic and amylolytic ferments. There is also an internal secretion of hormones which stimulates peristalsis when injected into rabbits. Waller and Cole believe the appendix is a physiological "test tube," and fecal material, normally retained in the appendix from one period of digestion to another, provides bacteria for colonic digestion.

The nerve supply of the appendix is splanchnic and pelvic visceral.

The etiology of appendicitis has been carefully studied by Rosenow, who concludes that this disease, in the absence of foreign body, is usually caused by streptococci; that these bacteria are located in some distant focus of infection; that they simultaneously acquire an elective affinity for the appendix and entrance into the blood stream and are then carried to the appendix. The location and removal of foci of infection is an important measure of appendicitis prophylaxis. The co-existence of appendicitis and throat infections is thus explained. The danger of appendicitis lies in the fact that the anatomy of the appendix favors strangulation and the growth of facultative anaerobes. Rosenow states that 14 strains from appendicitis produced lesions in the appendix in 68 per cent of the 68 rabbits injected, which is a marked contrast to an average of 5 per cent of lesions in the appendix in the animals injected with strains isolated from sources other than appendicitis. The localizations of the strains from appendicitis, ulcer of the stomach, and cholecystitis as isolated, after animal passage, resemble one another very closely in cultural and other respects. Those from appendicitis are least virulent, those from ulcer occupy a middle position, and those from cholecystitis are the most virulent. Their virulence seems to be one of the factors that determines their place of survival after intravenous injection.

Anderson also emphasizes the relationship between appendicitis and tonsillitis. He states that the tonsil is well recognized as a part of entry of many systemic infections. The appendicular involvement may be only part of a generalized infection,

hence the gravity of such cases is out of proportion to the local symptoms. Chronic tonsillar infections should be kept in view as the possible cause of similar infections of the appendix.

The diagnostic value of rigidity of the right rectus muscle has been so greatly emphasized, according to Randell, that many cases of appendicitis have been neglected in the absence of this sign. The right external oblique may be rigid when the right rectus is not.

Ruthkevitch believes that chronic appendicitis is frequently diagnosed as some functional gastric or intestinal disorder of nervous origin. Many patients have no history of previous attacks or of characteristic pain. Constipation, tenderness at McBurney's point, and temperature are often negative. He concludes that there are no diagnostic signs of chronic appendicitis. Palpation is the best guide.

Bastedo's sign is valuable: he distends the previously emptied bowel with air through a rectal tube. Pain over McBurney's point is elicited if the appendix is diseased.

McWilliams suggests the difficulty of diagnosis in cases of chronic appendicitis in which local pain and tenderness are mild or absent. These cases are characterized by distant reflex disturbances. He classifies them as follows: Pain type, characterized by colics in children, simulating gastric or duodenal ulcer, or gallstones. This class includes cases of pylorospasm. Nausea type. Vomiting type. Gas type. Intestinal type characterized by toxemia producing anemia; chronic constipation; chronic diarrhoea and colitis. Billious or toxic type with headache. Neuresthenic type. Medical treatment is of no avail. He warns against the use of such terms as nervous indigestion, neuresthenia, gastralgia, intestinal toxemia and billious headaches as indicating a functional disturbance unless an organic basis can be ruled out absolutely.

Morley believes that chronic inflammation of the right adnexa is the commonest cause of erroneous diagnosis, and of the difficulty of diagnosis of the case of appendicitis that has never had an acute attack.

Aynesworth states that the average incidence of appendicitis in children up to 15 years old is 15 per cent. The large number of pus cases in children are due to late diagnosis.

Syms reports a mortality of 100 per cent in a series of peritonitis cases of appendiceal origin in 1904. Improved operative methods decreased his mortality in 1912 to 16 per cent. He believes in immediate operation at any stage of appendicitis. If infection is present, a rapid, simple operation, with drainage is indicated. The after-treatment consists in washing the stomach if there is nausea, vomiting, or extreme sepsis, and withholding water per mouth for 24 to 48 hours; keeping the patient in the Fowler position; use of the Murphy drip; clear water by the lower bowel to relieve distension; no cathartics, few drugs, no opium; stimulation if necessary. If the pulse or heart is weak, the Fowler position should not be used. Post-operative ileus is due to spreading peritonitis, septic infection, excessive manipulation at time of operation, faulty placing of drains, failure to empty lower bowel before distension, and the use of morphine or opium.

Deaver and Pfeiffer state that early operation in appendicular peritonitis is the rule, but may be actually harmful after cases of more than 40 hours duration.

Murphy says the death rate in the hospitals of the U. S. is 10 per cent. Turner states that early operation would reduce the death rate to 1 or 2 per cent.

L. F. W.

THE CENTRIFUGE CONCENTRATION OF MALARIA PLASMODIA FOR DIAGNOSTIC PURPOSES.

Foster M. Johns, *New Orleans Medical and Surgical Journal*, June, 1916, has evolved a technique which seems to be another step in clearing up some of the difficulties sometimes found in examining blood for plasmodia. He notes the similarity of symptoms of chronic malaria, pernicious anemia, chlorosis, splenic anemia, syphilis, etc., and that the clinical diagnosis is often in doubt, that a positive diagnosis would mean everything in such case; that the number of demonstrable malaria parasites in the peripheral blood is so small, usual examinations may not reveal them. Bass and Johns method is as follows:

1. Draw 10 cc. blood.
2. Add 0.2 cc. of a 50 ½ dextrose solution to prevent death of other changes in the parasite.
3. Defibrinate to prevent coagulation; or add 0.2 cc. of a 50 per cent solution of sodium citrate. When using the sodium citrate, the blood platelets may be more or less troublesome to one not thoroughly familiar with malaria parasites.

4. Place half the blood in each of two centrifuge tubes and centrifuge until the cells have completely separated from the plasms, and the leucocytes have risen to the surface of the cell column. The plasmodia rise to the surface with the leucocytes.

5. Skim off about one cc. from the top of the cell columns, including the leucocyte layers. Place this into a smaller tube (diameter) and centrifuge as before.

6. Draw off the leucocyte layer carefully and make one or more blood spreads. Stain and examine.

In the best preparations made in this manner malaria plasmodia are concentrated about nine hundred times. Very small plasmodia just immediately after having entered red cells are not concentrated to the same extent. One should find nearly as many plasmodia in one minute spent examining such a preparation as he would in fifteen hours spent in examining the usual preparation of the same blood. In many instances in which after several hours of diligent search for plasmodia in ordinary preparations without finding any, a few minutes spent on centrifuge preparations of the same blood many plasmodia were found.

C. A. T.

NEW BOOKS

In this department publications sent THE JOURNAL will be acknowledged as they are received. Reviews of new publications will be made only as space and time permit. Publishers are requested to bear this in mind in forwarding books, etc., for review.

VENESECTION—A brief Summary of the Practical Value of Venesection in Disease, for Students and Practicians of Medicine. By Walton Forest Dutton, M. D., Fellow American Medical Association; Member Medical Society of the State of Pennsylvania, etc. Illustrated with several text engravings and 3 full-page half-tone plates, one in colors. Crown octavo. About 250 pages. Extra Cloth, \$2.50 net.

This is an old subject placed upon a scientific basis. Venesection is not used as a panacea, but as an adjunct in treatment. In this manner venesection, after the author's methods, can be used with the same therapeutic accuracy as digitalis.

Venesection is advocated in many grave conditions not treated at length in our present day text books. The author's treatment of cardio-vascular conditions, more especially hypertonia vasorum cerebri, is worthy of attention. He has opened a new field for the student as well as the practitioner. The author's repetitions are made purposely to better enable the reader to grasp the subject discussed.

Venesection is a life-saving measure in conditions with toxic and foreign irritants in the blood, as in illuminating gas poisoning, eclampsia, uremia, scarlatinal nephritis, diphtheria, typhoid, etc.

The technique and rationale of venesection are treated at length.

This monograph is succinct, comprehensive and entirely practical which commends it at once to the student and practitioner.

INTERNATIONAL CLINICS.

A Quarterly of Illustrated Clinical Lectures and Especially Prepared Original Articles, edited by Henry W. Cattell, M. D., with the collaboration of Chas. H. Mayo, Sir Wm Osler, and many other eminent American and European authorities. J. B. Lippincott Co., Philadelphia and London.

Volume III, Twenty-Fifth Series

This issue of the International contains interesting articles among others on "Gonorrhoea; Its Complications and Sequelae," By Lewis W. Bremerman; "Pyelocystitis and Acute Nephritis in the Young," Floyd B. Riley; "Sanitation Among the Indians," Leonard B. Frescoln; "Defects in Our Public Insane Hospital Systems," Edward Huntington Williams; "The Malingerer; A clinical Study and the chapters devoted to surgical subjects are splendid, consisting of war experiences in Germany and France," L. Rahm; "The Treatment of Fractures of the Lower End of the Radius by Reduction and Contour Splints," John B. Roberts; "Traumatic Injuries of the Nose and Their Treatment," William W. Carter; "The Surgery of Tonsils and Adenoids," H. H. Amsden.

Volume IV, Twenty-Fifth Series.

This issue contains notable articles on "The Coming of the Age of Internal Medicine in America," Sir William Osler; "The Centenary Volume of the Clinics," by the editor, Dr. Henry W. Cattell; "Etiology, Diagnosis and Treatment of Hookworm Disease," William H. Deaderick; "The Value of the Roentgen Examination for Gall-Stones," Jas. T. Case; in which the writer states that at least half of the cases may be demonstrated in this manner, due to the improvement in the X-ray machine technic, etc. The volume also contains the past twenty-five years progress in Neurology and Psychiatry by Julius Grinker; In Obstetrics and Gynecology by J. W. Ballantyne and Surgery by George W. Crile.

Volume I, Twenty-Sixth Series.

Articles to be especially noted in this volume are: "Chorea; Including a New Treatment," Edward E. and W. H. Mayer; "Pellagra," Beverley Tucker; "On the Early Diagnosis of Gastric Cancer" Julius Friedenwald; "Prolapse of the Genital Organs in Women," Henry F. Byford; "The Manage-

ment of Inevitable Abortion," C. L. Nichols; "The Non-Operative Treatment of Fractures of the Long Bones," John B. Roberts; "Combined Efforts to Annulify Surgical Shock," George S. Foster, and "A General Review of Medicine for the Year 1915," by Frank A. Craig and Johan Speese.

SURGICAL AND GYNECOLOGICAL NURSING.

By Edward Parker, M. D., Surgeon to Providence Hospital, Washington, and Scott D. Breckinridge, M. D., Gynecologist to Providence Hospital, Washington. Cloth, illustrated, 425 pages with 134 illustrations. Price, \$2.50. J. B. Lippincott Company, Philadelphia.

This is a very attractive little book, neatly and conveniently arranged, well illustrated. The contents consider the phenomena of cell life, sources and modes of infection and wound infection; surgical pathology; technic in surgical nursing; chapters on the patient, on the operation, dispensary work, emergencies and an epitome of the commoner surgical and gynecological conditions.

1915 COLLECTED PAPERS OF THE MAYO CLINIC.

1915 Collected Papers of the Mayo Clinic, Rochester, Minn. Octavo of 983 pages, 286 illustrations. Philadelphia and London: W. B. Saunders Company, 1916. Cloth \$6.00 net; Half Morocco \$7.50 net.

There are thirty-seven contributors to this work, composed of Chas. H. and William J. Mayo and members of their staff. The large amount of material available in this clinic from which case reports and statistics enter into this compilation makes it very instructive and practical reading. The latest diagnostic and operative methods are discussed, bringing the work up to the minute. The exhaustive study of pathological conditions of the stomach and duodenum are of particular interest; this subject together with detailed description of constructive surgery of the bile tract area make this publication well worth the careful reading of every physician and surgeon interested in this phase of the work.—Willour.

THE CLINICS OF JOHN B. MURPHY, M. D.

The Clinics of John B. Murphy, M. D., at Mercy Hospital, Chicago. Volume V Number II (April 1916). Octavo of 176 pages, 32 illustrations. Philadelphia and London: W. B. Saunders Company, 1916. Published Bi-Monthly. Price per year: Paper \$8.00. Cloth, \$12.00.

Among the many interesting articles in this issue the one on "A Talk on the Surgery of Tendons and Tendon-Sheaths" is of particular interest at this time on account of the part it plays in furnishing important information regarding these structures. Such information being of great value in tendon transference in cases of infantile paralysis. This article, while not going into all details, is one of the best that has been published for a long time.

There is also a report of a case of tendon transference in infantile paralysis of the leg.

The author's article on Cervical Rib with a collective review is an extremely valuable one.—J. H. W.

GYNECOLOGY.

Gynecology. By William P. Graves, M. D., F. A. C. S., Professor of Gynecology at Harvard Medical School. Octavo volume of 770 pages with 424 original illustrations, 66 of them in colors. Philadelphia and London: W. B. Saunders Company, 1916. Cloth, \$7.00 net; Half Morocco, \$8.50 net.

This is one of the remarkable books recently issued on the subject of gynecology. The illustrations are nearly all original. The trying and extended operation for carcinoma of the cervix by Wertheim's method is profusely illustrated, some in color. Schauta's operation for cancer of the cervix is also thoroughly and beautifully illustrative of the difficult vaginal hysterectomy for that condition. Many other special operations in gynecology are also treated. The book as a whole deals with the physiology and relationship, bacteriology and pathology and technic of gynecologic surgery and is a valuable contribution to gynecology.

THE BASIS OF SYMPTOMS.

The Principles of Clinical Pathology.

By Dr. Ludolph Krehl, Ordinary Professor and Director of the Medical Clinic in Heidelberg. Authorized Translation from the Seventh German Edition by Arthur Frederic Beifeld, Ph. B., M. D., Instructor in Medicine, Northwestern University Medi-

cal School, Chicago, with an introduction by A. W. Hewlett, M. D., Professor of Internal Medicine, University of Michigan, Ann Arbor. Third American Edition. Philadelphia and London: J. B. Lippincott Company, 1916, 517 pages; cloth, price \$5.00.

This translation is one of the most entertaining and readable books ever written on the subject of pathological clinical physiology, interpreting various pictures of disturbed physiology and function observed in clinical work. The book has a faculty of drawing the practitioner's reasoning and deductive forces to a marked degree, something certainly to be greatly desired in the medical profession today. The writer believes this book to be one of the most useful ever written.

DISEASES OF THE EYE.

Diseases of the Eye. By George E. deSchweinitz, M. D., LL. D., Professor of Ophthalmology in the University of Pennsylvania. Eighth Edition, Thoroughly Revised and Enlarged. Octavo of 754 pages, 386 text illustrations, and seven lithographic plates. Philadelphia and London: W. B. Saunders Company, 1916. Cloth, \$6.00 net; Half Morocco, \$7.50 net.

This book has been well and favorably known for a number of years. It is one of the best American text books on the subject and its popularity is attested by the numerous editions.

The present edition is a complete revision and shows many important additions, which have been made necessary by the recent developments in ophthalmology. Among these is a short section on anaphylactic keratitis with a suggestion as to its bearing on interstitial keratitis, and an account of the ocular symptoms in disease of the pituitary body.

The chapter on iritis has been rewritten and the etiological role of autotoxemia and the mucous membrane infections is discussed. A number of the newer operations are included in the section on operations. The description of Corneo-scleral Trephining, is written by Lieut.-Col. Elliott. Preliminary Capsulotomy by Homer Smith's method, Thread Drainage of the Anterior Chamber, Extraction of Cataract in the Capsule after Subluxation of the Lens with the Forceps, Capsulo-Muscular Advancement with partial Resection, (Zeigler's Method) and Window Resection of the Nasal Duct, are among those described.

The revision brings the book thoroughly up to date and it will continue to be a valuable work, both to the student and the practitioner.

FULLENWIDER.



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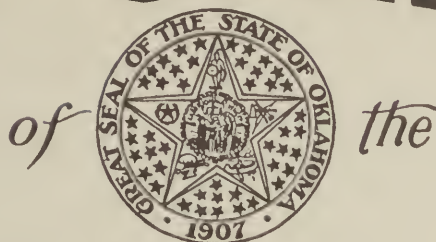
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THE ACCESSORY SINUSES OF THE NOSE.*

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THE ANATOMY, PHYSIOLOGY AND PATHOLOGY OF THE ACCESSORY SINUSES OF THE NOSE

By ALONZO C. MCFARLING, M. D., Shawnee, Oklahoma.

Although volumes might be written upon the anatomy, physiology and pathology of the accessory sinuses, I shall discuss the subject in its different phases as briefly as I may to meet the requirements for which this paper was intended. And this, I offer as my apology for any unseemly omission or abridgment of the subject.

That we may the more easily correlate with the various sinuses, any point of surgical importance, or any pathological condition entailed by reason of peculiar anatomical formation; and, to facilitate their anatomical description, I will briefly outline the topography of the lateral wall of the nose.

For rhinological purposes this wall may be divided into three portions. 1. The inferior turbinal portion. 2. The middle nasal passage. 3. The ethmoidal portion.

1. The inferior turbinal portion extends from the superior insertion of the inferior turbinate in the maxillary bone to the floor of the nose, thereby including the turbinate in its boundaries.

2. The middle nasal passage includes that portion of the lateral nasal wall lying above the inferior turbinate and below the ethmoidal bulla and posterior attachment of the middle turbinate. It is therefore bounded above, anteriorly by the bulla, and above posteriorly by the attachment of the middle turbinate, externally, by the processus uncinatus, hiatus semilunaris and pars membranacea, below by the attachment of the inferior turbinate, and internally by the middle turbinate and partially by the septum.

The ostiums of the sinuses of the first series empty into this passage.

3. The ethmoidal portion of the lateral wall of the nose includes all of those structures situated above the inferior margin of the middle turbinate, i. e., bulla ethmoidalis, middle turbinate and ethmoidal capsule including the superior turbinate.

*A Symposium Presented at the Annual Meeting, Oklahoma City, May 10, 1916.

Passing from the topography of the lateral nasal wall to the study of its basic structure, we find that two structures form its principal component parts; namely, 1. Superior maxillary bone (inferior portion); 2. Ethmoidal capsule (superior portion). The entire structure is completed by the addition of the palate, inferior turbinate and lachrymal bones.

The internal aspect of the inferior portion of the superior maxillary bone presents conspicuously a large opening (hiatus maxillaris) leading into a crater-like cavity which is partially closed in by the overlapping edges of bone. This cavity is the maxillary sinus and in the recent state is entirely closed in with the exception of one small ostium hidden by the lip-like projection of the uncinate process.

How this hiatus maxillaris is walled up and what structures enter into the formation of the partition between the maxillary sinus and the nasal cavity will now engage your attention.

The opening is not round, but takes on the character of a broad V at its inferior margin and is closed in by serving as a place of articulation for the inferior turbinate in the following manner. The inferior turbinate does not articulate with the lateral nasal wall as a pendulous body, but by a comparatively broad base which forms a distinct portion of that wall. This base fits snugly into the V-shaped edge of the maxillary hiatus and with the latter completely encloses the lower fourth of the maxillary antrum, and constitutes the thinnest portion of the lateral wall below the inferior turbinate.

The remaining three-fourths of the opening is closed in part from above by the ethmoid capsule which enters largely into the formation of the lateral nasal wall. If a straight line be drawn from the floor of the nose to the lamina cribriformis, it will be seen that the ethmoidal capsule occupies practically one-half the entire distance; and in its articulation with the superior maxillary bone, closes the superior part of the V-shaped maxillary hiatus.

With the inferior turbinate in place below, and the ethmoidal capsule in place above, it will now be noticed that the orifice leading into the antrum is considerably smaller, the remaining portion being for the most part closed in by a long, flat, curved strip of bone coming from above and extending downward and backward, practically dividing the remaining space. This process, however, does not hang free in the cavity, but is held in position by several projections articulating from the adjacent bones. It is a part of the ethmoidal capsule and is known as the uncinate process.

Immediately above the uncinate process, covering the superior margin of the maxillary hiatus in a similar manner as the maxillary process of the inferior turbinate covers the inferior, is situated a smooth, hollow, semispherical bony projection, which is the bulla ethmoidalis.

The entire slit or aperture between the uncinate process and bulla appears to lead into the maxillary antrum, but such is not the case, as it is completely enclosed by thin bone with the exception of a small hidden ostium at its posterior third. Because of its shape, this channel is described as the hiatus semilunaris and is of interest and importance because the frontal, anterior ethmoidal and maxillary sinuses have their ostia associated with or emptying into it.

The orifice leading into the antrum is now greatly reduced in size, the remaining opening having somewhat the shape of a fish hook, but broken up into smaller segments by the various bony projections emanating from the uncinate process. This still leaves rather a considerable opening, even though it is interspersed with several bony bridges. In the skeleton, this opening is always present because no more bony tissue enters into the formation of this wall. In the recent state, however, this defect in the structural development of the nasal wall is replaced by the muco-periosteum of both the nose and maxillary sinus in the following manner; the mucous membrane and periosteum of the nose are so intimately interwoven that it is almost impossible to separate them, consequently they form a continuous

covering for the osseous structures beneath. This membrane in the region of the uncinate process does not dip down into the empty spaces, but bridges them over, thereby forming an unbroken wall except in one small space between the posterior third of the uncinate process and bulla, where an aperture is constant which is the ostium of the maxillary sinus.

The same condition prevails in the lining membrane of the antrum and we, therefore, have the spaces around the uncinate process covered in by two layers of muco-periosteum which completes the partition between the nose and the maxillary sinus. This part of the nasal wall is known as the pars membranacea and is of surgical importance because it is the thinnest and most resilient part of the wall.

The pars membranacea is bounded above by the bulla, behind by the palate bone, below by the insertion of the inferior turbinate, and in part by the uncinate process, and thereby enclosing the posterior portion of the uncinate process in its boundaries. When accessory ostia are present they are situated between the processes of the uncinate, usually between that body and the inferior turbinate.

The lateral wall of the nose is completed by the addition of the palate and lachrymal bones. The palate bone forms the posterior portion of the lateral wall of the nose, as well as the hard palate, and presents crests for the attachments of the middle and inferior turbinates, but is of little importance as far as the accessory sinuses are concerned.

The lachrymal bone occupies a space between the frontal process of the superior maxillary and the lamina papyracea of the ethmoid, and is of surgical importance chiefly as a land mark in the operation on the ethmoidal cells by the orbital route, as the posterior ridge corresponds approximately with the anterior boundary of the ethmoidal capsule.

The maxillary sinus is situated within the body of the superior maxillary bone, and is irregularly pyramidal in shape with the lateral wall of the nose forming the base, the apex being at the junction of the molar with the superior maxillary. It has three sides, a superior, an anterior and a posterior and a base. These sides or walls constitute the limitations of the sinus proper, which is bounded above by the orbital plate of the superior maxillary, anteriorly by the canine fossa, and posteriorly by the pterygomaxillary fossa. The base, as has already been stated, is formed by those constituents which enter into the formation of the lateral nasal wall.

The most important wall from the point of view of the rhinologist is the nasal, and for two reasons: (1) Because it contains the sole opening into the sinus and is the first to show pathological changes when the sinus is affected. (2) It is the thinnest and presents the easiest mode of attacking the cavity, either for diagnostic or therapeutic purposes.

The anterior or wall of the canine fossa is next in importance, as radical operative procedures are usually made through this wall. It can range from the thinness of ordinary writing paper to several millimeters in thickness, depending upon the age of the individual and the construction of the facial bones. The thinnest portion of this wall is directly in the centre of the canine fossa. The infraorbital foramen lies in this wall close to its upper margin directly over the canine fossa, which fact must be borne in mind in performing extensive resections.

The posterior or sphenomaxillary wall is usually of even and constant thickness, and presents little of importance in the study of the accessory sinuses. The superior or orbital plate is of interest on account of the dehiscences which it frequently presents, and its close proximity to the orbit, as well as the fact that the infraorbital vessels and nerves are practically enclosed in its walls.

The size and capacity of the sinus depend largely upon the amount of bone reabsorption which has occurred, as well as the sex and age of the individual. The dimensions of an average maxillary sinus would be approximately; height 3.5 cm; breadth 2.5 cm; depth 3.2 cm. The normal capacity may be put at about 10-16

c.c. The interior of the maxillary sinus is not always smooth, but quite often presents partial septa which are usually situated on the floor and in the superior internal angle. The formation of complete partitions in the sinus is, fortunately, of rare occurrence.

The mucous lining of the maxillary antrum consists of three layers; ciliated epithelial, tunica propria and periosteal; the two latter, however, are so intimately connected that to all intents and purposes they form one.

The glandular supply is very meagre, being confined for the most part in region of the ostium. The entire thickness of the combined layers is rarely more than .02 millimeters. It is especially loose around the ostium and prone to oedematous swelling on slight irritation.

The mucosa receives its blood supply from a branch of the nasal artery which penetrates the ostium, as well as through the pars membranacea.

Studying the sinuses in the order of their size and surgical importance, we now pass to a description of the frontal sinus.

The frontal sinus, lying in the ascending ramus of the frontal bone, takes the shape of a pyramid with the base lying inferiorly. It possesses three walls; an inferior, a posterior and an anterior. The anterior wall is composed of cancellated bone tissue and varies in thickness from 1-16 to 5-8 of an inch, the heaviest portion being directly over the superciliary ridges. The posterior wall is much thinner, rarely exceeding 1-16 of an inch; however, it is composed entirely of compact bone tissue, which somewhat compensates for its lack of bulk. The inferior or orbital wall is the thinnest, and at its anterior and internal junction directly inside of the orbital ridge, seems to show a decided tendency towards thinness, for at this point swelling and bulging outward of the bone may occur in some cases of chronic sinusitis.

While the normal sinus may be said to be bounded in front by the supra-orbital portion of the frontal bone, behind by the cerebral wall, and below by the orbital plate of the same bone, it assumes such a variety of sizes and shapes, for the purpose of comparison, we will accept the arbitrarily-chosen normal frontal sinus as suggested by Hajek.

We will thus assume that the normal sinus extends from the median line to the supra-orbital notch, and from this point by a concave line back to the median line.

This may vary from complete absence of the sinus to its spreading to extensive proportions; thus it may extend laterally to the superior orbital process of the malar bone, or superiorly to a point high up on the vertex, or posteriorly to the lesser wings of the sphenoid.

The shape may be regular, but it is usually extremely inclined to the opposite, assuming all sorts of fantastic forms and directions, depending upon the amount of re-absorption the bone has undergone.

It apparently is quite independent of its fellow on the opposite side, as one side may be fully developed, while the opposite side practically fails; in fact the two sides are perhaps never exactly similar. The left side is usually larger than the right.

The two sinuses are separated by a bony septum whose position may greatly modify the relative size and shape of the sinuses, as it is capable of showing great deviations at the expense of the cavity toward which the deviation occurs. Complete absence of the septum never occurs, although one sinus may occupy the entire frontal region, in which case but one opening into the nose is present. The septum however is practically always constant in one position; namely, at its origin directly behind the articulation of the nasal bones. At this point it is straight and situated in the median line, and should a deviation occur, it takes place above this point.

The inferior wall or base of the sinus is not flat, but is the shape of a small

inverted pyramid with an aperture at its apex which is known as the frontal ostium and is the means of communication between the frontal sinus and the nose. This ostium may empty directly into the nose, or into an enclosed duct which empties into the nose. This naso-frontal duct is not present in every instance, but is formed as follows:

The anterior inferior extremity of the frontal sinus is constructed by the impingement of the anterior superior nasal spine which helps form the frontal ostium. The ethmoidal bulla is usually situated several millimeters posterior to this structure, thereby allowing the infundibulum to expand; however, when the bulla ethmoidalis lies anterior to its normal position, instead of the infundibulum being wide, it is narrowed into a duct which is closed in, laterally, by the anterior attachment of the middle turbinate. Thus it may be seen that the duct when present is situated at the superior end of the hiatus semilunaris—in fact, is a continuation of that structure into the frontal sinus. Its length varies from 1-8 to 1-2 an inch, depending upon the encroachment of the ethmoidal bulla.

This relation of the hiatus semilunaris does not always exist however, as the hiatus assumes two different anatomical formations; (1) Direct method of emptying; (2) indirect method. By direct method is meant that the hiatus leads directly into the ostium of the frontal sinus without the intervention of any anatomical hindrance. The indirect method presupposes the presence of an infundibular cell situated in the hiatus so that it forms a blind ending to this structure, the frontal ostium being situated farther above.

The interior is usually not smooth, but shows various irregularities. Partial septa hiding great recesses are often seen, sometimes making the sinus appear to be double. Cases have been reported in which these septa have been complete, thereby forming an enclosed cell within the frontal sinus which was isolated.

The frontal sinus is lined with a mucous membrane which is quite similar to that of the other accessory cavities, being exceedingly thin and adherent to the bone. Mucous glands are even more sparsely met with than in the maxillary sinus.

The blood supply is through the ostium from branches of the sphenopalatine. The venous circulation anastomoses in several directions; (a) externally into the facial vein; (b) internally into the nose; (c) posteriorly into the dura; (d) internally into the orbit. This fact must be continually borne in mind when impending complications threaten.

Next in the order of surgical importance, we now come to study of the ethmoid cells, which of all the other sinuses are perhaps the most baffling to the descriptive powers of the anatomist.

The ethmoid cells embrace all that portion lying between the two lateral plates of the orbit. It is composed of two capsules with a partition (lamina perpendicularis) between. The capsules have a prolongation at their internal inferior angle corresponding to the middle turbinate. The external inferior angle or body of the capsule represents the bulla ethmoidalis, and is the most dependent portion of the cellular structure.

Immediately beneath the bulla may be observed the uncinate process, which at its curve is the lowest portion of the ethmoid bone. Along the internal lateral wall of the capsule a projection occurs which represents the superior turbinate. This is not a true turbinate bone, but rather formed by an indentation in the body of the ethmoid.

The anterior boundary of the capsule is represented by the uncinate process; the posterior border corresponds to the anterior sphenoidal wall, or when present, to the sphenothmoidal fissure.

It will be observed that the capsule is composed of several furrows running in oblique direction from behind forward, and below upward. As these represent the fundamental ground work of the entire structure, it would be well to apply the scheme of Seydel for our further consideration of the labyrinth.

For illustrative purposes, let us suppose that a box was fitted up with four curved partitions, three complete and one partial one. The three posterior partitions extend completely from top to bottom, making these closed spaces, while the anterior incomplete one reaches from the bottom but half way to the top. The box is now covered with a lid which extends some distance below the lower edge.

The ethmoidal capsule may be compared with this structure. The lid which corresponds to the middle and superior turbinates is raised, bringing into view the partitions which correspond to the lamellae of the various structures which enter into the formation of the labyrinth.

Partition, or lamella No. 1, represents the uncinate process; No. 2, the bulla ethmoidalis; lamella No. 3, the middle turbinate, and lamella No. 4, the superior turbinal process. Above these grooves lie the network of cross lamellae which constitute the ethmoid cells.

The number and size of the cells depend upon the position of the lamellae. The number of cells in each labyrinth varies in the normal subject, the lowest number being perhaps two or three, the highest about ten or twelve.

The ostia of the anterior cells lie beneath the middle turbinate in the middle nasal passage, while those of the posterior labyrinth empty into the superior nasal passage below the superior turbinate. Each cell has its separate outlet, although some may open into others before finally appearing in the nasal cavity.

The total capacity of the entire labyrinth approximates 8-10 c. c. The mucosa lining the cells is similar to that of the sinuses except somewhat thinner. It contains some few glands—sufficient to keep the surface moist.

The ethmoid obtains its blood supply from the superior nasal branch of the sphenopalatin as well as the anterior and posterior ethmoidal which springs from the ophthalmic artery.

Veins are divided into two groups; (1) Ethmoidal veins returning along the course of their respective arteries, penetrating the anterior and posterior ethmoidal foramina into the orbit, finally emptying into the ophthalmic vein which empties into the cavernous sinus. (2) The ethmoidal veins on the **Cribriform Plate** anastomose freely with the veins of the dura mater and the superior longitudinal sinus. These explain why thrombosis of the longitudinal and cavernous sinuses can occur from purulent ethmoiditis, and why cases of meningitis following ethmoiditis have occurred without the intervening bone being affected.

This brings us to a consideration of the sphenoid sinus which is irregularly cuboidal in shape and occupies the body of the sphenoid bone, being situated directly behind the ethmoidal capsule at the posterior and superior portion of the nasal cavities. In the fully developed stage it presents a cavity which is capable of great variations in shape and size, depending upon the amount of re-absorption of spongy bone which has occurred.

The sinuses are usually two in number, separated from each other by a partition or septum which, like that of the frontal sinus, is capable of deviating to one side, thus making one side larger than the other.

Complete absence of this septum, thus throwing the two sinuses into one large cavity with a single ostium, has been observed. The ostium of the sinus is situated in the nasal portion of the anterior wall, usually in the upper third and seldom below the median line. Its shape is oval in the long axis or round and measures about 1-3 mm. in diameter.

The average capacity of the normal sphenoid sinus as taken from 180 specimens at random may be placed at 5-6 cm. The mucous lining of the sphenoid sinus is of a dull grayish color and extremely thin, denoting a lack of superficial vascularity. It does not adhere strongly to the bone, but may be readily removed with the forceps.

As with the other sinuses three layers may be separated; mucous, submucous, and periosteal. Glands are sparsely supplied except in the region of the ostium.

The veins of the anterior wall empty into the nose through the ostium, and into the ophthalmic, and those of the sides and roof, into the coronary and cavernous sinuses. These form an important factor in cerebral complications, for in the periosteal layer a network is present which penetrates the bony wall in numerous places and empties directly into the cavernous and coronary sinuses.

The arterial supply is obtained from the spheno-palatine, pterygo-palatine and vidian arteries. The spheno-palatine through the ostium, and the spheno and pterygo-palatine through the floor.

Passing from their structural anatomy to the **Physiology** of the accessory sinuses, we are presented with numerous theories which have been advanced regarding their precise function, and even at the present day many authorities will hold almost directly opposite views as to their significance.

Among the theories which have been advanced from time to time, I shall mention four, which perhaps have the most semblance of probability; (1) Remains of certain rudimentary structures which in the lower animals serve as important adjuncts to the sense of olfaction. (2) An adjunct to olfaction by evenly distributing the inspired air in the olfactory region. (3) To lighten the bones of the skull. (4) Adjunct to respiration. Moistening the inspired air.

The extensive experiments of "Braune and Clasen" have definitely shown that a certain amount of air change takes place in the sinuses during respiration. The volumetric changes are not in ratio to the amount of inspired air passing through the nasal chambers, but depend more upon the degree of one inspiration, thus, for example in the maxillary sinus during ordinary respiration the air change is relatively small, while in forced inspiration, particularly as the alae of the nose are drawn in, the rarefaction of the air in the sinus will equal that occurring in the nasal passages.

A different function may be attributed to the ethmoid cells than to the sinuses proper, however great our ignorance of the latter may be. In the first place the anatomical configuration of the two structures is totally dissimilar. The sinuses (frontal, maxillary and sphenoid) are true cavities enclosed by bony walls and outside of, or adjunct to, the nasal cavities proper. While the ethmoid labyrinth on the other hand may be likened unto a sponge, and is contained within the boundaries of the respiratory portion of the nose.

From these anatomical facts, and from the experiments of "Paulsen and Zwaardemacher" and others on the air currents passing through the nose during inspiration and expiration, we may state definitely that this structure exercises great influence on the warming and moistening of the inspired air.

This brings us to the consideration of the pathological changes in the mucous membrane of the sinuses, but before doing so, however, it may be well to briefly review the normal histology.

The normal histology of the lining membrane of the sinuses is, to all intents and purposes the same, i. e., the microscopic appearance of the antral mucous membrane is practically identical with that of the sphenoid or frontal sinus; the ethmoid cells present some slight difference chiefly on account of structural peculiarities.

A cross section of the mucous membrane of the maxillary sinus under the low power of the microscope will show the following structures; the epithelium is composed of ciliated variety similar to that found in the respiratory portion of the nose, a subepithelial layer containing the blood vessels and glands, the latter occurring as isolated clusters scattered here and there. This layer is so intimately associated with the periosteum that it is not possible to distinguish a dividing line.

The pathological changes which occur in the course of purulent inflammation depend upon several conditions: namely, the length of time the disease has prog-

ressed, virulence of the attacking micro-organisms, resistance the sinus has shown toward the disease, and the favorable or unfavorable drainage conditions. These conditions are so intimately associated that it is impossible to differentiate them, so far as the microscope is concerned; therefore, they had best be considered under the more general heading, acute and chronic.

In the acute stage the microscopic appearance of the epithelium is unchanged, while the mucous membrane as a whole is oedematous, intracellular spaces filled with lymph, more or less round-cell infiltration depending upon the degree of irritation, punctiform hemorrhage through the connective tissue, blood vessels engorged, glands unchanged.

If the pathological process continues, the round-cell infiltration becoming pronounced; petechial hemorrhage and desquamation may occur in the mucosa. The round-cell infiltration may penetrate the deeper layers until the bone is reached with subsequent tendency to ulceration carries.

Complete resolution cannot occur after this stage has been reached for the destruction has been so extensive as to preclude the possibility of nature overcoming these pathological changes. The mucosa is thickened from overgrowth of connective tissue. The lining epithelium having lost its cilia is metamorphosed into the squamous or pavement variety.

The glands are for the most part destroyed and the blood supply greatly diminished by the obliteration of the finer arterioles and veinlets. If restitution does not occur in a given length of time, the disease may be said to have become chronic.

Chronic sinus inflammation exhibits two types; hyperplastic and ulcerative. These forms are not entirely dis-associated as transitional stages are found in the same sinus. In the hyper-plastic, the mucous membrane is of a grayish color, often wrinkled and papillomatous and more or less loose from the underlying bone. Hyperaemia, while present, is not so marked as in the acute stage. Oedematous changes occur in the mucous membrane which are similar to the ordinary nasal polyp. There is thickening of the connective tissue, and in some cases new growth formations may be found.

Retention cysts often occur from constriction of the neck of the glands by the infiltration and connective tissue formation.

The true ulcerative type is probably not found as such, but is rather a hyperplastic condition associated with ulcerosus.

The relative extent of this pathologic process seems to depend more upon the pressure to which the mucosa is subjected than to the micro-organisms infecting the sinus unless the organisms be especially virulent, in which case the ulcerative process may extend into the bone. Actual destruction of a part of osseous wall of a sinus, however, is relatively rare.

Not only do we have ulceration and necrosis due to pressure of the internal secretion, but there may be sufficient pressure to produce dilatation of the sinus, walls in certain cases; namely, mucocele, pyocele and latent empyema.

Mucocele is a condition due to an accumulation of mucous secretion in a sinus resulting from obstruction to its outlet, with ultimate distention of the walls of the cavity. The sinuses most frequently affected are the frontal and anterior ethmoid cells. Mucocele of the sphenoid sinus perhaps never occurs.

The aetiology of these mucoid accumulations is not entirely clear, but suffice it to say, that the ostium of the affected sinus has been gradually occluded by chronic catarrhal inflammation; the glands of the sinus mucosa continuing to secrete, the end result must be a gradual distention of the walls, with ultimate rupture.

If the mass is allowed to accumulate, considerable deformity, particularly from the standpoint of the orbit, will occur, and irreparable damage may be done

to the eye of the affected side. If by any chance a mucocele becomes infected, a pyocele immediately results, changing the process from an ultra-chronic one to one of acuteness, depending upon the virulence of the infection.

If sufficient time elapses, there may be cholesteatoma formation, or a metamorphosis of the secretion into a cheesy mass, the "Verkassung" of our German confres.

This condition occurring during the course of a sinusitis is due to the regenerative ability of the sinus mucosa, as well as the attenuated virulence of the infecting micro-organism.

The inflamed mucous membrane recovers little by little, until it is able to withstand the attacks of the micro-organisms. The retained secretion, not being able to escape, becomes stagnated, loses its moisture, and a fatty degeneration of the pus corpuscle results. After a time this mass becomes more or less solid with certain characteristics of soft cheese.

Latent empyema is a term by which we understand the presence of a well defined suppurative process within a sinus which may continue without giving rise to appreciable symptoms, and being probably due to infection by micro-organisms of slight virulence. This condition is in reality a mild catarrhal process, nevertheless may become virulent and even fatal under the influence of certain forms of irritation.

Malignant tumors of the sinuses are not as common as is generally supposed, the one most frequently met with being carcinoma. Any of these may excite a true purulent sinusitis through breaking down and ulceration of the mucosa. The tumor itself usually remains unrecognized until tumefaction sets in.

In closing, I wish to say that this paper was not intended as a classical exposition of the subject matter, many points of interest having been purposely omitted; but, in anticipation of the papers which are to follow, I have endeavored to present to your minds a few only, of the more salient features of the anatomy, physiology and pathology of the accessory sinuses.

SINUSITIS

By J. H. BARNES, M. D., Enid, Oklahoma.

The cause of sinus disease begins in childhood when they are having colds a greater part of the time during the cold winter months. Their nose is closed from breathing and discharging pus for one to three weeks every time the weather changes or when they get their feet wet. These children have adenoids and if they do not disappear early in child life the result is sinusitis in later life when all the sinuses are well formed. The obstruction to breathing in these adenoid children will cause the greater per cent of malformations of the septum of the nose, such as deflections to left or right and spurs on either side. These are produced by the hard palate being pushed up from mouth breathing. In most cases of spurs and deflections of the septum, we find a high arched palate.

These malformations of the septum is the direct cause of most cases of sinus disease. When an adult of twenty to forty years of age has a severe infection in the nose from influenza, pneumococcus or staphylococcus or the ordinary cold, the drainage is bad in the obstructed nose and the result an extension of the nasal infection into the sinuses. If the swelling and obstruction is too severe, the cold may be several weeks in subsiding. If this is repeated a few times, we will have a chronic condition to follow. We seldom have sinus disease before twenty years of age, and if not before forty, seldom after this age. So sinusitis is a disease of young manhood, for men are more often affected than women, being less exposed.

Certain families seem to be addicted to frequent colds, children of tubercular parents, syphilitic families and those poorly clothed and nourished. Patients

with low vitality, such as heart disease, bright's disease, diabetes, over-eating and the loss of sleep and rest and exhaustion are some of the predisposing causes.

When the deflection of the septum is in the region of the middle turbinate, sinusitis is more apt to follow a very few colds. In this region is located the drainage canal of the anterior sinuses, the frontal, the maxillary and the anterior ethmoid. The posterior ethmoid and sphenoid drain into a sulcus just above the middle turbinate towards its posterior end, while the other canal is beneath the middle turbinate nearer the anterior portion. So any obstruction or irritation causing a swelling or enlargement of the middle turbinate may cause disease of one or all of the sinuses.

Every time a child has a cold there is a slight thickening of the mucous membrane of the nose, and this often repeated will soon bring about an obstruction, blocking up more or less the drainage of the sinuses into these two canals. A severe cold will cause the mucous membrane of the sinuses to become swollen, and this often repeated will cause some of the mucous and pus to remain in the sinus, and if the infection is severe enough or the bacteria is so virulent, the ciliated epithelial lining of the sinuses will be destroyed; then the sinuses are no longer able to clean themselves as they are able to do in ordinary infections, so our condition becomes chronic suppurative sinusitis.

In some infections, such as influenza, there is no pus; then we have the non-suppurative sinusitis. The acute attack is quite severe with great swelling and excoriation of the cilia of the turbinates and lining of the sinuses. There is a great deposit of serum and fibrin thrown out, and only a few attacks, or a moderately prolonged attack, will cause a chronic non-suppurative sinusitis. The swelling and the following hypertrophy may be sufficient to block the whole sinus.

The openings of all the sinuses are so small and located in a place that makes the sinuses practically a closed sinus when there is the least of swelling of the mucus of the nose or sinuses. The frontal has the most perfect drainage and yet its opening, the infundibulum down into the hiatus semilunaris, is almost immediately closed when the sinus becomes involved.

The maxillary has a very small opening at the top of the sinus in the hiatus semilunaris under the middle turbinate, which is closed even by the swelling of the middle turbinate. The same is true of the sphenoid, its opening being at the top of the sinus above the middle turbinate.

The anterior ethmoid opening into the hiatus and the posterior ethmoid opening above into the posterior sulcus with the sphenoid. So, when considering the anatomy of these sinuses, we can easily see that a diseased middle turbinate can cause diseases of all the sinuses and hence the middle turbinate becomes the key to the whole pathology of the sinuses. When the sinuses become obstructed it may become catarrhal or pustular. When there is no pus the ciliated epithelium is not destroyed; if it is the acute form it will return to normal, but if the obstruction continues and the process becomes chronic the membrane becomes hypertrophied, lining the cavities. This condition may continue indefinitely and may later become pustular.

In the pustular form the ciliated epithelium is often destroyed, depending on the virulency of the organism causing the disease. The bony tissue may become involved with increasing necrosis and attack adjacent structures such as the orbit, teeth, brain and optic nerve.

When the orbit is involved there is watering of the eyes, redness of the conjunctiva, the eye ball is sensitive and painful. When the nerve is attacked, which is more apt to be from the sphenoid, there is a dullness of vision and gradual loss of sight. When the necrosis extends into the brain any form of brain disease may be expected.

We do not always have pain with sinus disease. When we do it is very characteristic and is often a severe type, being of the pressure form.

The chronic suppurative sinus gives least pain of any form. We may have suppuration with necrosis of bone and very little symptoms other than a discharge. The acute and the chronic non-suppurative forms give the greatest pain. The pain in the acute frontal sinus disease is of a severe type. It begins with a fullness in the head and nose, soon becomes of a pressure nature, feels like head is too full. Then it localizes over the eye with tenderness on pressure over the frontal sinus and just under eye brow next to the nose. The pain comes on after the patient is up for an hour or two, gradually gets worse, and towards evening the pain gets better and the patient is able to rest all night. This is repeated the next day; the pain begins about the same time and runs the same course each day. This was called "sun pain" by some of our old school doctors, for it seemed to come and go with the sun. The duration is from two to five days. Repeated attacks will lead to suppuration.

The maxillary sinus is not nearly so painful as the frontal in acute inflammations, there being more room for expansion when it swells. There is a tenderness in the canine fossa on pressure just internal and below cheek bone. The teeth feel too long and tender when chewing on the affected side. The eye may become red and tender, with some headache, worse when stooping over. Sometimes feels like something rolls to the affected side.

The pain in the ethmoid sinus is felt between the eyes and on pressure at the side of the nose.

The pain in the sphenoid and posterior ethmoid is worse through the temples and the base of the skull—felt at back of neck.

The greater the obstruction in sinus disease the more pain we have. The obstruction is best observed in the middle turbinate region. The septum is seen to be deflected against the middle turbinate. Ridges on the septum very near the floor will cause a damming up of the secretions and an obstruction.

Any discharge of pus from the nose for more than a week or ten days is always to be found in one or more of the sinuses. We have only to look and determine from its relation to the middle turbinate and by exclusion know the particular sinus it comes from. The pain will also aid us.

The acute pustular form is sometimes very painful and if we have necrosis it will be worse at night.

The chronic non-suppurative is a form that is often over-looked and diagnosed as a rhinitis, or many times it is called hay fever.

The symptoms are very much like hay fever. There is a boggy, stuffed feeling of the nose, with a water discharge, worse at times. Sneezing and itchy feeling in nose. There is more or less headache and with the acute attacks on a chronic condition the eyes water and become red and all the above symptoms are exaggerated.

This condition in some form, either light or severe, exists winter and summer and the attacks come at any season and usually several attacks during each season, winter and summer. It does not come with the blooming of any certain flower at a particular time each year as does hay fever. When we examine the nose we will find the middle and superior turbinal regions of a polypoid nature, bathed with thin mucous and the whole space occluded.

We are not able in the time given us to tell one-half of what should be said about etiology, pathology and symptoms of sinus diseases, but if we can study this outline we will be able to better understand this is one of the great bug-bears of nasal surgery.

Etiology. 1. Primary. (a) Adenoids; (b) Spurs and deflected septums. 2. Secondary. (a) Family; (b) acute colds; (c) general conditions of patient.

Pathology. 1. Acute catarrhal. 2. Acute suppurative. 3. Chronic suppurative. 4. Chronic non-suppurative.

Symptoms. 1. Pain. 2. Obstruction. 3. Discharges.

THE ACCESSORY SINUSES OF THE NOSE

Treatment—Conservative and Radical

By G. E. HARTSHORNE, M. D., Shawnee, Oklahoma.

When we undertake the treatment of the sinuses we necessarily must consider the ducts connecting them with the nose, which in turn brings the lacrimal duct and sac into consideration, for in my mind I think it is more often the seat of obstruction and infection than any one of the other ducts leading from the nose—rather to it.

Conservative treatment includes astringent and antiseptic collyria instilled into the eyes to be drained down the duct; treatment of the mucous membrane of the nose, especially around the nasal orifice of the duct, and I think the silver nitrate in 4 per cent solution is the best remedy we have for the latter, and argyrol and the weaker solutions of zinc sulphate for the former; also under this head we should, if necessary, slit up the canula and probe the duct, repeating the probing every four or five days, and in the meantime keep up the instillation of astringents in the eye. If pus is present in the sac, it should be thoroughly irrigated with 1-5000 bi-chloride, and if the discharge continues for any length of time after using the irrigation just mentioned, it will hurry the recovery by syringing the sac with a one per cent silver nitrate solution at least twice a week. It only takes a few drops of the solution to fill the sac and care should be used to prevent its overflowing onto the cheek, as it causes such a strain when exposed to the light.

Radical treatment of an occluded duct should be confined to forceably probing it, unless there is a dacryocystitis, then complete removal of the lacrimal sac is about the only way to insure success; and DeSwitz has recommended the removal of the lacrimal gland. I have never seen the gland removed and believe that the resulting loss of moisture would produce a worse complication than the epiphora. It is very easy to induce local anesthesia with novocain and adrenalin to remove the lacrimal sac, unless the patient is very nervous or a child; then it will be necessary to use a general anesthetic.

The antrum of Highmore has been treated conservatively for many years by dentists, who extracted either the second bi-cuspid or the first molar, or both, and drilled an opening into the antrum. We surgeons used to do the same thing quite often, but in later years, I am glad to say, we have abandoned the procedure for more scientific measures. Drainage through such an opening only resulted in allowing the pent-up secretions to escape when they made considerable pressure, and necessitated a constant watching and treatment of the opening and the wearing of a plug or plate to prevent constant drainage into the mouth. It also produced a condition that would always be with you, for there were rare cases of cure from such procedures. The first attention to either an acute or chronic sinusitis should be directed to the nasal mucous membrane and turbinates. The nose should be gently sprayed with astringent and cleansing liquids, the system should be put in as good general condition as possible by free catharsis, in acute attacks the administration of small doses of morphine and atropine relieve the pain and dry the secretions, that is, check them. I used to hesitate to use morphine on account of the slight swelling it produced of the nasal mucous membrane, but I have given it a pretty thorough trial and now use it almost universally in affections where the ducts are hyperemic. If no benefit results after a few days, we are sure to have an increase in our pressure with its consequent pain and swelling. When conservative treatment fails we will have to choose between several modes of procedure. The direct application of a four to ten per cent silver nitrate solution over the inferior and middle turbinate and under the middle one will often produce results, especially in acute attacks, where other remedies have utterly failed.

My operative treatment of the antrum has been confined to less than a dozen cases and three of them were of long standing and had sinuses established, which

indicated the procedure most applicable. In the elective cases I have always used the combined methods of opening the antrum through its anterior wall, and after inspecting the interior of the antrum a counter opening is made through the thin plate of internal wall, coming out through the middle meatus about an inch from the anterior tip of the inferior turbinate. I have used a small wedge shaped augur for making my initial opening into the bone and then enlarging it in any direction I saw fit, with a Kerrison's bone cutting forcep or gouge. The pus and lining membrane should all be removed and the cavity packed with one piece of gauze, saturated with benzoin compound, and either end allowed to protrude from each wound. After the first dressing, which should be done in the third day, the gauze is not allowed to protrude from the wound in the anterior wall, and only a small piece of gauze can be introduced into the nasal opening. Irrigation should be kept up daily until all discharge stops, which will vary from two to six weeks, usually, though some are more obstinate than others, and months may pass, and even a second operation be required. Most of my troubles have been from persistent granulations, and keeping my patient encouraged enough to keep up the treatment. I had one case several years ago where there was a sinus opening at the superior and external angle of the antrum, involving the malar bone as well as the maxillary; due to syphilis, and with strong constitutional recovered completely in five weeks. I enlarged the sinus already there and made counter opening in the internal wall as described. I do not believe we are ever warranted in doing as extensive an operation as is advocated by the Denker method; I believe it is one of the operations applicable to clinics, where "the galleries are to be played to;" no one does them in private practice.

Acute inflammations of the ethmoidal cells are usually treated successfully by the same methods as outlined in treatment, medicinally, of the antrum, and as are also all the other accessory sinuses. Conservative operative measures are confined to removal of the anterior end of the middle turbinate, to permit drainage of the cells, and to deplete the remaining tissues by the hemorrhage produced by cutting off the soft parts. Radical treatment of the cells has been done by a wide range in degrees of procedure; from the simple curetting of the lower cell walls to the complete removal of the cells en masse, and the removal of the cells, nasal bones and anterior sphenoidal cell walls; but here, again, especially in the case of Moure's operation, I think the main object is to have something to write about that is original, and a new way to demonstrate one's technical skill. Bal-lenger's method of removing the cells en masse is probably, in his hands, a very good procedure, but I have not seen a case that I felt warranted in attempting it. I have removed all the posterior cells and the anterior wall of the sphenoidal sinus, and have had very gratifying results. The most trouble I have had has been from hemorrhage, which in two different instances has caused me to lose sleep; hemorrhages coming on in one case three days after the operation, and in the other several hours afterward. And in both cases I had used about one per cent. solutions of adrenalin chloride, as I had also done in all of my sinus work. I think I would use the orbit-ethmoidal method if my patient already had a sinus opening into the orbit, as is often the case; but so far I have had none where that condition existed. Referring to the subject of hemorrhages again, I will relate an experience I had some two months ago. A young man of about twenty-five was in the hospital at Holdenville with a broken leg, and when about ready to leave decided he would have his nose operated upon for a chronic ethmoiditis, and had Dr. Linn call me over there to do it. I removed the middle turbinate and curetted the ethmoidal cells and sphenoidal sinus into one cavity, on one side only. I packed the cavity pretty snugly with one long strip of iodoform gauze, and the second day he came to Shawnee to have it redressed. On account of his being on his way to Oilton, where he probably would not find a doctor at every corner, I repacked the cavity and instructed him to remove it, or get a doctor to do it the second day. He wrote me about a week later that he had had the gauze removed as I had directed and that during the night of the third day following he

had awakened just in time to get help to prevent his bleeding to death. Of course, I do not know how much he did bleed, but the doctor that he called in told him him that I should be prosecuted for not having it packed for several days longer. I had given him a spray of campho-menthol in liquid albolene.

Outside of medicinal treatment of the sphenoidal sinus I have not had much benefit from conservative treatment. I have irrigated the sinus in years gone by, but now open it either through the ethmoidal cells or enlarge the normal opening with the Kerrison punch, curette it very gently and pack it with one piece of gauze for two or three days and then wipe it out with four per cent silver nitrate twice a week, and irrigate it every day as long as any discharge is present. After the middle turbinate is removed there is not much trouble in treating the sinus if the ethmoidal cells are not involved.

The frontal sinus has been treated for a long time by different methods of enlarging the normal opening, but I have not been very successful in irrigating the sinus without enlarging the duct, and was just a little bit afraid to do so much bone cutting entirely by the sense of touch. Medicinal remedies internally have given me good results, when an acute condition was present, with the application of the silver nitrate to the middle meatus, and the middle and lower turbinate. I have twice removed the anterior end of the middle turbinate in chronic cases and tried irrigating the sinus with weak permanganate and normal salt solution, but after several weeks resorted to the conservative radical operation. All the time I was irrigating these cases I was having the patient use a watery solution of glycerine and iron as a spray.

So far I have only found it necessary to remove part of the bone at the junction of the orbital plate and the supra-orbital ridge, between the supra-orbital foramen and the nasal bone, only making the opening large enough to allow a free curetting of the sinus, and the ridge is not destroyed enough to make any marked deformity. After curetting the sinus I enlarge the frontal-nasal duct from the top and can see pretty well where I am curetting. I close the upper opening after packing the sinus lightly with either iodoform or benzoin compound tincture gauze. The third day the gauze is removed through the fronto-nasal duct, and irrigation is kept up until all drainage subsides. The middle turbinate should be removed before making the external opening. I also apply the silver nitrate solution to the mucous membrane of the affected side while keeping up the irrigations. The same as in the ethmoidal radical operations—I do not believe the necessity ever exists for a Killian operation, except where necrosis has already made the operation only one of smoothing up and curetting away dead tissues. I saw Chiarie and Slimmer each do one Killian, and saw several patients who had been operated upon some time before, and will say they looked something like I imagine a shell from a German “42” would leave a field of loamy soil. They both said that it was not an operation for private patients, and as few, if any, of us are staging any plays for the grand stand, I think we should all condemn it.

Discussion

Dr. Todd, Oklahoma City: I am sorry that I did not hear the first paper by Dr. McFarling, but Dr. Barnes has given us a particularly good discussion of the subject of sinusitis. It is one of the interesting subjects, because these conditions give us so much trouble. One of the phases of sinusitis that concerns me as much as any is in the acute infections with closed empyemata, and to know just exactly how much surgery I should do in these noses at this time. This was especially impressed upon me by a case which I handled in a very prominent family. This patient developed acute sinusitis following influenza, which as you know, is a type of sinusitis that is generally severe. In this particular case it affected the anterior ethmoids and the frontal sinuses. I tried to establish drainage by using astringents, cocaine and adrenalin chloride, hot douches, etc., but was not successful. The patient was a very sick woman. Failing in this, I concluded it was

necessary for me to enter the sinus to establish drainage. I removed the anterior end of the middle turbinate and had I done only this my patient would probably have come out all right. I went on and cleaned out the anterior ethmoids, removing the the anterior end of the middle turbinate. The result was my patient developed meningitis and was dead in three days. I have since changed my tactics, especially when I am pretty sure they have an infection following influenza. I do believe, gentlemen, we want to consider with a good deal of seriousness just how much surgery we are going to do in these very acute infectious cases. I think it should be our purpose to attempt to establish drainage without operative procedure, if possible, and wait until the pus becomes attenuated and the viciousness of the condition is somewhat subsided. The differential diagnosis in these cases is often difficult; I have a case right now that I declare to you that I am not quite sure whether I have the frontal sinus involved. There is no question about the anterior ethmoids being infected, but I am considerably in doubt whether or not the disturbance in the frontal sinus is due to the obstruction from the diseased anterior ethmoids, rather than a direct infection.

Another question that deserves consideration is how much operating should you do in the presence of pus in these old chronic infected nasal sinuses, such as removal of turbinates, ethmoids and resection of the septum for deflections. If the patient is not having an acute exacerbation, I operate at once and can report no serious or unpleasant results.

In making a differential diagnosis in these sinus infections, I follow much the same plan as suggested by Dr. Beeman Douglass of New York, with which you are probably all familiar. Using all the methods at our command I think most of you will agree with me that in some cases, at least, a positive diagnosis is rather difficult. I enjoyed Dr. Barnes paper very much indeed. I thank you.

Dr. A. W. Roth, Tulsa: Mr. Chairman: My experience has been that these acute frontal sinus cases do respond nicely to treatment, that we can shrink the tissues and with hot douches, establish drainage without operative work.

In the chronic cases, the removal of the middle turbinate in part, or in its entirety, and establishing drainage, leaving the nose in a condition that will not be a detriment to your patient the rest of his life.

Recently several cases have come to me which have undergone operation for ethmoid, sphenoid or frontal sinus trouble, in some of our Eastern cities. These operations were performed over a year ago. As I look into these noses, I wonder what will be the end, the enormous cavity, the varnish appearance of the mucous membrane. An atrophic condition which I am sure will cause more annoyance than the original trouble. On one, adhesions have formed, forming a curtain from the top of the nasal cavity down to a line even with the superior border of the inferior turbinate; there is a good drainage back of the curtain, but not free breathing, the sinus still discharging and many of the old symptoms present.

All of these cases are far from being well and are seeking relief.

I feel that there is a great danger in this operative work when so much tissue is removed. The immediate results may be quite satisfactory, but as time passes, the case will certainly be greatly annoyed by the atrophic condition.

Dr. D. D. McHenry, Oklahoma City: There is one thing in these acute cases that has not been mentioned that has been very successful in my hands, and that is suction. The plan of shrinking the mucous membrane of and around the opening into the sinuses certainly helps. But after this, if you will put negative pressure in the nasal cavity by suction, you will drain the sinus much better. It is always necessary to teach the patient to hold the palate against the posterior pharyngeal wall, and this is not always easy to do. But by patience it can be done, and in my hands in the acute conditions especially, it is the most successful treatment I have used.

I am inclined to think the last speaker, if he keeps up the practice of doing sub-mucous resections in the presence of any acute infections, will sooner or later get into grief. If he does the sinusitis any good, he must necessarily go high up on the septum and so open an avenue of infection to the cribriform plate. Hayes of New York and others have reported deaths from meningitis from infection following sub-mucous resections, and I would consider doing one in an acute sinusitis only as a last resort.

Dr. Barnes spoke of the old sun pain being a sinusitis; I can not agree with that, I will agree that many cases of sinusitis are periodical. But I believe most of them are a malarial neuralgia. I am not much of a bacteriologist, and do not put all of these cases to the expense of a blood examination, and even when they have been examined and no plasmodia found I have seen many of them cured by strong malarial treatment. Have seen two cases the last ten days—one a relative and the other a physician—that were both cured rapidly by 40 grains of quinine daily for a few days. The thing that bothers me is chronic catarrhal sinusitis. Other men talk about having them and treating them but I do not see them. It may be my inability to diagnose them and I would like a little more light on the method of finding them.

Dr. Ferguson, Oklahoma City: I wish to emphasize the remarks of Dr. McHenry regarding the danger of operating on the sinuses during an acute attack. I believe that it is dangerous and sooner or later the one that follows that line will have reasons to regret it. It has been my practice in these cases of acute frontal sinusitis, or where the antrum is involved with acute inflammation, to simply break the middle turbinate away from the nasal wall, in this way allowing free drainage as well as breaking inflammatory adhesions, nearly always found in this location. This has given excellent results in my hands and in practically all cases it has been unnecessary to do a more radical operation.

Dr. Abernethy, Altus: As Dr. Ferguson has just stated about Dr. McFarling's paper, there is nothing further to be said, Dr. Barnes' paper was a very excellent one, also. I am anxious to hear all I can about the treatment of the acute condition of the nose. The very fact that we all have different opinions as to the best treatment shows there is a great deal yet to be learned about the various treatments being used.

My opinion is, and it is not worth much, as I have not had any extended experience to try, to preserve as far as possible all the anatomical structures. The tendency with so many of us younger men is to operate on everything that comes to us and I can say on one or two occasions I made a mistake along that line myself. I remember now a case I had last fall of acute frontal sinusitis, which was a very painful one. I made two attempts to drain through the normal opening, the ordeal of which was so severe the patient did not come back. After three or four days I met the patient and asked him how he was getting along and why he did not come back for his treatment? He answered me by saying; "Doc, you just liked to have killed me." By persuasion I got him to come back to my office and by using conservative methods I soon established thorough drainage. The point is this: the acute inflammation had subsided and by the use of cocaine and adrenalin, the tissues were contracted so the drainage could be established with comparatively no pain. As a matter of fact, if we do as one doctor suggested, remove turbinates in these acute conditions, the patient will always be a sufferer from dryness of the pharynx and scab formation in the nasal space which is an embarrassing and deplorable condition to have.

I have had one or two patients suffering this way who told me they wished they were dead. I remember seeing a lady who had been treated by the most eminent specialist for these symptoms for six years without any improvement whatever. I think we should preserve all the anatomical structures possible in nasal operations, thereby saving our patients all the discomforts of dry nasal passages, bad breath and all unhappy symptoms, the result of too radical operations in the nose.

ACTIVE IMMUNIZATION BY VACCINE THERAPY.*

By W. H. BAILEY, A. B., M. D., Pathologist to Wesley Hospital, Oklahoma City, Okla.

At one time in the history of medicine, the diagnoses of infectious diseases was only to be approached by observation of the clinical signs or symptoms, as the temperature, pulse, rash, etc. The finding of specific etiological agents, as the tubercle bacillus in tuberculosis, the diphtheria bacillus in diphtheria, etc., was a long step forward in diagnostic methods. Within the last ten years or so investigations have been made to discover the presence of anti-bodies formed by the reaction of the patient to the infectious organism. From these experiments have been developed the newer diagnostic methods as the Widal agglutination test for typhoid, the Wassermann complement-fixation test for syphilis, and numerous other serological reactions.

The course of a disease depends not only on the nature, virulence and number of infecting organisms, but also upon the reaction of the infected animal. It is a balancing reaction the same as any chemical equation. The means employed by the body for its protection are by cellular and serologic activity. Tuberculosis causes the tubercle as its dominant cellular reaction, so also syphilis has its peculiar picture—the plasma cells. The bio-chemical reactions that take place in the body fluids are not so easily discovered nor so well understood.

Ehrlich's side-chain theory is the working plan on which the serological reactions were built. It soon became evident that many natural or physiological processes were of a similar nature to the pathological reactions that lead to the formation of anti-infectious bodies.

Closely associated with serum diagnosis is serum or vaccine therapy. The anti-bodies, which are the reaction bodies formed, are of several different classes, depending entirely on their form of activity, such as agglutins or precipitins, which have the property of grouping their specific organisms into small clumps or precipitates; as antitoxins which neutralize the poisons or toxins; as bacteriolysins which destroy the bacterial bodies themselves; and as bacteriotropins or opsonins which so alter the bacteria that they can be more easily destroyed by the cells of the body, especially the leucocytes. These are the known modes of reaction and it is probable that there are other unknown methods of immunity.

We have two broad divisions of immunity; active and passive. Then we have the division of acquired and natural immunity. We also speak of immunity as relative and absolute, apparent and true. Although there are numerous individual differences between the classes of anti-bodies, they all have one quality in common, that of specificity, that is, each is formed by an individual specific exciting substance or antigen. As this law is fundamental in serum diagnosis so also is it in serum therapy.

Active immunity may be divided into four classes. First, with living virus. Second, with dead virus. Third, with bacterial toxins. Fourth, with bacterial extracts.

Immunity from living virus most closely simulates the immunity given by overcoming the disease itself. Frequently a living virus multiplies so rapidly that before the animal has time to overcome its effects or manufacture anti-bodies, it has been killed by the toxin produced by the virus. Therefore, various methods have been taken to weaken or attenuate the virus so that it will give the immunizing effect but not produce any toxic symptoms. This is done primarily in two ways, either reducing the number of bacteria injected or diminishing their virulence. The first method has not been tried in man because the infectious nature of the bacteria might allow them to increase rapidly enough to cause a true course of the disease. Instead the second method, that of inoculation by an attenuated virus, is employed.

*Read before the Wesley Hospital Clinical Society, June, 1916.

The best known example of this latter type is vaccination against smallpox, the credit for the discovery of which belongs to Jenner. This consists in inoculation of an attenuated form of the smallpox germs, which diminution in virulence has been brought about by passage through a calf, which animal is less susceptible than man.

Pasteur recognized this principle as having a general application. He found that rabies could be transmitted to a dog by injecting it sub-durally with a small portion of the brain substance of a rabid animal. This ordinary virus is known as "street virus." The normal incubation period is from three weeks to six months or longer. By passing the virus through a series of monkeys, the incubation period is so much lengthened that it finally becomes practically innocuous. On the other hand its virulence may be increased by passing it through a series of rabbits, which animals are very susceptible to rabies, until the incubation period is reduced to six or eight days. It cannot be shortened below this time, and this virus is called "fixed virus". Instead of making use of the weakened "monkey strain" for treatment, the strong "fixed virus" is used after it has been attenuated by drying over potassium-hydroxide, at a temperature of 23 to 25 degrees C. It was found that if the spinal cord of a rabbit which has developed "fixed virus" rabies is dried eight days, its incubation period when injected into another rabbit was very much prolonged, and if dried much longer than this, its virulence was entirely lost. The treatment, therefore, consists of various schemes or working plans for injecting first the weakened virus, and gradually increasing its strength until on the last day of the treatment, one that has been dried only one day is given. The "serum," or vaccine proper, consists of an emulsion of a section of the spinal cord of a rabbit that has developed "fixed virus" rabies.

Other methods of attenuating the infectious organisms aside from passing through less susceptible animals and drying, are growing the bacteria at too high a temperature, exposing them to direct sunlight, disinfectants and moderate heating.

The mixing of bacteria with their specific serum, which is obtained from animals that have been inoculated with these bacteria, also diminishes their virulence. Bordet has termed these "sensitized bacteria." In this mixture the bacteria unite with their specific anti-bodies, they are later removed from the serum by centrifuging and the "sensitized bacteria" used as the vaccine. Practically the same result can be obtained by injecting the bacteria and at the same time the proper amount of their specific serum. This is known as the "simultaneous method" and is very successful in the treatment of hog cholera.

2. Immunization with dead bacteria, or "bacterins," is claimed by some not to be an immunization against the disease, but against the bacterial bodies. In practically all the vaccines made from dead bacteria the organisms have been killed with heat, and a weak antiseptic added to the bacterial emulsion. Care must be taken to get the temperature high enough to kill the organisms but not to allow it to go so high as to destroy the immunization power of the bacteria. For the ordinary bacteria as typhoid, colon, staphylococcus, streptococcus, and pneumococcus, one hour at 58 to 60 degrees C is the temperature to use. The bacteria are grown 24 to 48 hours on a solid medium. The culture is washed off with sterile physiological salt solution and this emulsion or suspension is placed in a sterile test tube for a few minutes to allow any particles of the medium and the larger clumps of bacteria to settle to the bottom. The upper portion of the suspension is then transferred to another test tube and standardized. At this time five-tenths percent phenol or three-tenths per cent tri-cresol is sometimes added to further insure its sterility after heating. The suspension is then transferred to a large single ampule or in varying quantities in separate one cc. ampules. The graduated quantities in the separate ampules are brought up to 1 cc. capacity by the addition of sterile salt solution and the ampule sealed in a flame. The vaccine is then heated in a water-bath for one hour at 58 to 60 degrees C. It is always

safer to inoculate an agar culture tube with some of the vaccine after it has been taken from the water bath and incubate it 12 to 24 hours to be sure that all the bacteria have been killed. The vaccines are then ready for use, and are best given by a hypodermic injection at the insertion of the deltoid, at intervals of 4 to 6 days depending upon the degree of local and systemic reaction.

The standardization of the vaccine or the number of bacteria per cc. has been worked out by various methods. One, that of Wright, in which a drop of the vaccine is mixed with a drop of blood of known R. B. C. count, and from the proportion of bacteria to the corpuscles found in a certain field of the microscope the number of bacteria per cm. is estimated. Another method is to compare the opacity of the bacterial suspension with a certain standard of opacity of some insoluble mineral salt. This standardization is not carried out often in actual practice as the worker soon learns to judge with his eye the proper opacity to use for the beginning of the course of treatment and after that the local and systemic symptoms are a far better indication of what the next dose should be than any cut and dried method of increasing by so many million bacteria at each dose.

"Sensitized bacterins" are also made by the treatment of dead bacteria with their specific serum, the same as with live bacteria, and these are known as "sero-bacterins". The special advantage claimed for sero-bacterins is, that they do not give nearly so severe local or systemic reactions, that they can be given in larger and more frequent doses, and that they often will obtain results in the later stages of an infection when simple bacterins or antitoxic sera, will not be of any benefit.

Certain infections seem to yield more favorably to vaccine therapy than others. Those in which favorable results are more often obtained are: furunculosis, carbuncles, chronic otitis media (where there is no bone necrosis), acne, chronic bronchitis, bronchiectasis, chronic gonorrhea, chronic abscesses in general (when not due to syphilis or tuberculosis), chronic cystitis, erysipelas, bacterial pyorrhea, arthritis (due to local foci of infection), typhoid (prophylactic), and endocarditis (when due to streptococci).

3. Immunization by injection of toxins is the third group of active immunity. Toxins are the secretions of living bacteria. Von Behring found that if an animal is injected with a sub-lethal dose of diphtheria toxin, that is, a dose that it is able to resist and then after a certain time it is injected with a lethal dose, the animal will remain alive. The animal has manufactured some substance within its body that makes it immune to the dose of toxin that would have been more than enough to have killed it before. It has developed an anti-toxin. The serum of this immune animal when injected into another animal is able to protect it from an attack of the specific organism or a lethal dose of the toxin, thus giving the second animal a passive immunity.

4. The best known example of immunization with a bacterial extract is that of tuberculin which, although it probably has had more use as a diagnostic aid, still holds a very important and valuable place as a therapeutic agent. Various tuberculin preparations have been manufactured, none of which seem to contain all the toxins necessary for the establishment of complete immunity. The preparation most used probably is the Koch's "Old Tuberculin," made by growing the tubercle bacilli in 5 per cent glycerine bouillon 5 to 6 weeks, filtering out the bacteria, and evaporating the filtrate to 1-10 its original volume. This gives a brown syrupy liquid which keeps very well. The vaccine treatment consists of various schemes for giving different dilutions at stated intervals. If the treatment is not carefully carried out and the scheme being used thoroughly understood, it is dangerous and can become an actual menace to the patient's life and should not be attempted.

Bail evolved the theory that during an infection the bacteria secreted a substance that counteracted the protective power of the infected animal. These substances he called "aggressins". He believed that they were formed by living

bacteria and only in the living body of the infected animal. Wassermann and Citron later found that these same aggressins could be obtained outside of the body by simply extracting the culture of bacteria with distilled water or serum, thus producing an "artificial aggressin" instead of the "natural aggressin" of Bail. Bail's first success was to take the swine pest bacillus and inject a small amount of living culture into the pleural cavity of a rabbit, in which animal this organism is a "pure parasite" and very toxic. At autopsy the bloody pleuritic fluid was collected, freed of blood and bacteria by centrifuging and sterilized by five-tenths per cent phenol and heating to 44 degrees C for three hours. He then took guinea pigs, to which animal this bacillus is a "half parasite," and inoculated a series with some of this pleuritic fluid and at the same time with a living culture of the swine bacillus.

Pig No. 1 with 1-100 loop of bacteria, sub-cutaneously; this size dose it was found did not kill the pig, so was sub-lethal.

Pig No. 2 was inoculated with one and five-tenths cc. of the rabbit's pleuritic fluid, which contained the aggressin, and in addition was given 1-100 loop of the same bacillus culture. The pig died on the third day.

Pig No. 3 received one and five-tenths cc. of the pleuritic fluid alone and remained alive.

Pig No. 4 received the same sized inoculation of swine bacillus and twice the dose of aggression and died the second day.

Pig No. 5 received one-tenth the dose of bacteria and 2 cc. of the aggressin fluid and was made very ill for a few days, but finally recovered.

Bail and his pupils believed that it is not merely the presence of the bacteria that shows the existence of the disease, but as long as they are void of their aggressin properties they are the same as saprophytes and are harmless. They believe that bacteriacidal immunity is not a true immunity, as the vaccine which produces it does not contain any aggressin. They hold that the immunity is then only apparent and not against the disease itself, as all true immunity must be produced by the introduction of aggressin and the reaction bodies or anti-aggressins must be formed.

The following is the method of producing active immunity by either natural or artificial aggressins. Rabbits are chosen and a slow or rapid method may be used. This consists of giving the rabbit one to four cc. of aggressin sub-cutaneously or intra-peritoneally; the smaller doses are repeated at intervals of 5 to 10 days. Four to fifteen days after the last aggressin is injected, 1-100 to 1-10 loop of swine bacillus is injected. This is followed in about fifteen days by an injection of a full loop of the bacillus culture. Even a third injection may be given. These animals are found to withstand the inoculation, while control rabbits injected with 1-10,000 of a loop of the bacillus culture failed to survive. The important point to remember is that a long period must elapse between the last aggressin injection and the first inoculation with the bacillus, because that period of the procedure is one of hyper-susceptibility as was shown by the first series of experiments.

From a bio-chemical standpoint these anti-aggressins belong to the group of amboceptors used in the complement-fixation tests. The advantages gained from immunization by aggressins are the absence of possible dangerous effects, only slight local reaction, a high degree and long duration of immunity, the possibility of immunization against pure parasites, and the ease with which the material is preserved. The disadvantages are that the manufacture is somewhat complex, the increased susceptibility during the interval of inoculation and the onset of immunity. However, it is not too much to suppose that this method of immunity may in the future supplant to a large extent the ones now in use, which are extracts of dead bacteria, of which tuberculin is the best known example, or the injection of the dead bacteria themselves, the bacterins.

EARLY DIAGNOSIS OF INCIPIENT PULMONARY TUBERCULOSIS IN THE ADULT.*

By WALTON FOREST DUTTON, M. D., Tulsa, Oklahoma.

The diagnosis of incipient pulmonary tuberculosis is not an easy matter. This is true for several reasons: First, the patient is not aware of any pulmonary trouble, and does not, as a rule, consult a physician unless it is for some other ailment. Then, unless the physician is very thorough in his examination, the tubercular condition is overlooked. Second, the condition is often overshadowed by some other disease such as asthma, laryngitis, bronchitis, typhoid, pulmonary syphilis, pneumonia, actinomycosis, etc. Third, a complete history is imperative. Fourth, unless the physician be thoroughly conversant with and equipped for chest work, there will be a wrong diagnosis in a large majority of cases.

On examination, the patient is required to divest himself of all clothing with the exception of a breech cloth. If hair covers the chest and back it should be removed by shaving. This accomplished, the patient is placed in the recumbent position and instructed to breathe normally. Then he is told to breath rapidly, slowly, deeply, to count or cough, as the occasion may require. After the examination in the recumbent position, the patient should be changed to the sitting posture. In this position, many sounds are elicited that cannot be heard in other positions.

Inspection reveals little, if anything, in incipient cases of tuberculosis except those factors which have a predisposing character. The contour of the chest has very little, if any, diagnostic value. The expansile powers of the chest should receive some consideration, for restricted lung power undoubtedly predisposes to a diseased condition of the lungs. The classical phthisical chest is only noted in advanced cases or in patients emaciated from other disease.

Palpation has no value in the incipient period of tuberculosis. Percussion, in early diagnosis, is entirely negative. When apical unilateral hyperresonance is distinguished, an advanced stage is in evidence.

Auscultation is one of the best means of detecting the early lesion of pulmonary tuberculosis. For this purpose, I prefer the ear—nature's own stethoscope—for it is entirely reliable and obviates the possibility of adventitious sounds. Dieulafoy asserts that during the first period on palpation, dullness at one apex is found. Rough breathing, with prolonged, jerky expiration, is heard in the supra-spinous fossa, or in the clavicular region, together with subcrepitant rales or sibilant ronchi. The last signs are often absent, and only dry crepitations are heard after coughing.

Rough breathing and the so-called cog-wheel inspiration must be carefully noted. A squeaking, rasping, or abnormal sound in the lungs denotes a lesion. Rales may be entirely absent in the incipient stage. If present, after the patient is made to cough, there may be sibilant, crackling, or bubbling rales or the so-called mucous click, according to the advancement of the disease.

A well known authority asserts that the early manifestations of incipient pulmonary tuberculosis are: "(1) Physical signs: Deficient chest expansion, the phthisical chest, slight dullness or impaired resonance over one apex, fine moist rales at the end of inspiration, expiration prolonged or high pitched, breathing interrupted. (2) Symptoms: General weakness, lassitude, dyspnea on exertion, pallor, anorexia, loss of weight, slight fever, night sweats, and hemoptysis."

My only comment on the above is that such conditions exist only in an advanced first stage or beginning second stage of pulmonary tuberculosis.

During the first period, patients rarely, if ever, consider themselves ill. They may have a slight cough and little, if any, fever. They consider their indisposition due to dyspepsia, emui, or bronchitis and make no effort to change their manner of living until warned by a hemorrhage or severe exacerbation of the condition.

*Read before the Tulsa Academy of Medicine, March 31, 1916.

I am not in accord with Dieulafoy and many authors as to the region attacked in incipient pulmonary tuberculosis. In a recent series of fifty cases, I have had only one case in which the apex was affected.

I call the reader's attention to the fact that incipient pulmonary tuberculosis may present gastric symptoms similar to typical organic or inorganic stomach lesions, although gastric hyperacidity or normal acidity is generally observed.

Tubercle bacilli are never present in the sputum until the second period of the first stage, or later, but the presence of bacilli is positive evidence. Bloody expectoration, when not traced to the nose, throat, organic heart disease, actinomycosis, or to malignancy, should be assumed tuberculosis. The nasal and buccal membranes are apt to be flabby and pale, though the color index is normal. In any chronic disease associated with loss of weight, tuberculosis may be suspected.

The Moro reaction may be positive, due to latent tuberculosis through the presence of some old encapsulated tubercle. *A mild Moro denotes tuberculosis with low resistance; a strong Moro denotes tuberculosis with a high resistance.* The Diazo reaction occurs late, if at all. The Von Pirquet is not reliable in patients over twelve (12) years of age. Calmette's reaction is irritating and dangerous. Koch's tuberculin has much value as a diagnostic agent. The intradermic test is to be preferred.

Some authors maintain that there is accentuation of the second pulmonary sound in nearly all cases of incipient tuberculosis. I cannot agree with this statement. When this condition is present, there is a beginning second stage.

It has been said that in eighty per cent of the cases of incipient tuberculosis, the pulse will often disappear when the arm, corresponding to the site of the lesion in the lung, is raised above the head, or turned to the back of the body. This phenomenon is only found in the secondary stage of pulmonary tuberculosis and then it is not a reliable sign. About ninety-five of one hundred cases of early infection have normal rate of respiration and slightly, if any, increased pulse rate.

Abrams has shown that rales heard with difficulty over the apices may be heard more distinctly by using the stethoscope over the acromian processes. In the lower lobes, increased whispered sound is of great diagnostic value. It is said, by some writers, to be infallible.

In an examination of the lungs for incipient pulmonary tuberculosis the inspiratory and expiratory phase, together with the respiratory cycle, should be carefully noted. Adventitious sounds are often obscured by the cough. *Localized apical rales are almost pathognomonic.* The latent rale in the diagnosis of incipient pulmonary tuberculosis is of paramount importance. *The probable seat of the latent rale is in the atelectatic area of the tuberculous focus.*

Every adult who wastes much or rapidly with or without fever, with a steamboat exhaust pipe, or choo-choo rale, clicking, squeaking, or dry subcrepitant rale, must be suspected of having tuberculosis, in the absence of diabetes or Basedow's diseases. Every woman, who has neither genuine chlorosis, syphilitic anemia, nor Bright's disease, but has a chloro-anemic appearance, must be suspected of tuberculosis. Every individual who has haemoptysis, excluding bronchitis, diseases of the nose and throat, organic heart disease, actinomycosis, or malignancy must be suspected of tuberculosis.

This condition, verified by a positive tuberculin reaction, may be assumed and considered conclusive evidence of pulmonary tuberculosis.

There is no disease in the realm of medicine where an early diagnosis is of more importance than that of pulmonary tuberculosis, unless it is carcinoma. It seems difficult for investigators to deviate from the old established rote and rule of diagnosis.

This is plainly evident in the diagnosis of incipient tuberculosis. The attitude of most text-book writers, and ninety-nine per cent of all physicians toward

the diagnosis of incipient pulmonary tuberculosis, would be comedy if it were not for the tragedy it causes. This disease, which attacks all races in every clime, takes a toll of 175,000 persons in the United States every year. What is the matter? The laity ask the question. Medical authorities assert that pulmonary tuberculosis is a chronic condition, rarely acute. Why this continued prostitution of the profession by archaic authority? In what way has the medical profession improved upon the physical methods and teachings of Hippocrates and his contemporaries, respecting the diagnosis of incipient pulmonary tuberculosis? Is pulmonary phthisis spontaneously a chronic disease? Not any more so than cancer. *In tuberculosis, as well as in carcinoma, etc., intoxication or systemic involvement are not incipient, but the manifestation of the second period in the progress of the disease. Why should tuberculosis differ from other infectious diseases? It has a beginning as well as an ending. It differs only as other infectious diseases differ, in that the different types, or stages, are governed by the virulency of the various strains of bacilli and the resisting power of the patient.*

A pretubercular, or premonitory condition, may develop into an active tuberculosis in a few weeks, or months, according to the strain of bacilli and resisting power of the patient. A tubercular infection of low virulence in a patient of low resisting power, will give, as a rule, a slow developing infection. A high virulent infection, in a patient of low resisting power, gives a rapid developing infection.

A lesion of the lung, great or small, excluding asthma, bronchitis, laryngitis, pneumonia, pulmonary syphilis, typhoid, actinomycosis, and all non-tubercular diseases, can be assumed tubercular. Given a case with normal pulse, normal temperature, normal weight and no cough, and a negative history, in which is found a lesion, a pretubercular, if not a tubercular, condition is to be suspected. *A jerky, rasping sound heard on inspiration, accompanied by a low whistling sound on expiration, denotes an early lesion. This is the time for medical interference. At a time when the resisting forces are driven back and the barriers broken, the toxin enters the entire organism. Then the condition is no more incipient, but advanced into the first stage, and a rapid pulse, slight afternoon temperature, slight cough, slight loss of weight and other concomitant symptoms develop.*

Nothing is more praise-worthy than the physician who has studied nature from his youth, knows the elements of the human body, the diseases which attack it, the therapeutic value of drugs which will benefit it, exercises his profession scientifically and unselfishly, administering to the poor as well as the rich. Unless the physician is thoroughly conversant with and equipped for chest work, there will be a wrong diagnosis in the majority of cases. *To be thoroughly equipped, means to be both mentally and physically qualified. Any defect of hearing unfits a physician for chest work. The more acute this sense, the better prepared the physician, all other things being equal.*

In conclusion, therefore, I shall plead attention to and for the following:

1. Physicians who are thoroughly conversant with, and equipped for, chest work.
2. A most complete system in the taking of case histories.
3. Preparation of the patient.
4. Special attention to the sounds heard in incipient cases—the cog-wheel respiration; rough, clicking, squeaking, or rasping sounds; choo-choo or dry subcrepitant rales.
5. Division of each stage of pulmonary tuberculosis into three periods each as, first, second, and third period of the first stage, etc.
6. Latent and larval pulmonary tuberculosis is not incipient pulmonary tuberculosis.

7. Tuberculous intoxications, which cause the so-called anemias, neurasthenia, hysteria, and the various neuroses as, headache, vertigo, and insomnia, are due to second or third period progress in the first stage of incipient pulmonary tuberculosis or to later stages.

8. Rapid pulse, slight afternoon temperature, loss of weight, and slight cough are due to tuberculous intoxications of the first stage of pulmonary tuberculosis.

9. Respiratory disturbances, gastralgia, disturbed appetite, nausea, hemorrhage, night sweats, tubercle bacilli, are to be found in the third period of the first stage, or first period of the second stage or later.

10. The Moro reaction, Von Pirquet, and the intradermic test are valueless in the diagnosis of incipient, or first period pulmonary tuberculosis, but of invaluable aid in later periods.

11. A compulsory examination of the population quarterly.

12. All examinations to be conducted by competent physicians, who will be placed in full time service.

SOME PROCTOLOGIC DON'TS

By J. M. COOPER, M. D., Oklahoma City

Don't neglect to inject a fistula with methylene blue in peroxid of hydrogen that you may better trace the fistulous tract.

Don't forget that many of the failures in treating an external blind fistula result from not locating the opening into the rectum. Most fistulae that seem to be of the external blind type have connection with the rectum.

Don't make the mistake of cutting the sphincters obliquely, but always cut at right angles to the muscle.

In multiple fistulae, don't open the fistulous tract communicating with the rectum until the external tracts have almost healed. Why? First, because of less infection from the bowel. Second, because the tissues of the rectal wall heal more rapidly than the peri-rectal tissue. Third, because there is much less deformity of the anus.

Don't be afraid to incise the external sphincter where fissure in ano exists, and pack the wound with gauze strips daily until it heals.

Don't overlook the fact that 10 per cent balsam peru in castor oil, on gauze, is the best dressing for fistulous tracts and fissures.

Don't say that a case of pruritus ani can not be cured unless you have administered an autogenous vaccine made of the streptococcus fecalis.

Don't be deceived for many cases of rheumatism have been cured by hemorrhoidectomy.

Don't neglect to dilate the anus and rectum every two or three days, beginning about the fifth day after hemorrhoidectomy and continuing to dilate for two to three weeks. Why? To prevent abnormal constriction of rectum and anus.

Don't make the mistake of applying the cautery clamps obliquely, but place it at right angles to the lumen of the rectum. Why? That the resulting scar tissue will not constrict the rectum.

Don't be a party to the packing of the rectum with gauze after a hemorrhoidectomy, unless to control hemorrhage, which is bad practice. Your patient will always remember the hour of removal of that gauze. You need only to introduce a five-inch piece of stiff rubber tubing, one fourth inch in diameter, in rectum to allow for the passage of the gas.

Don't use too much force in massaging the prostate gland, as many cases of proctitis result from the improper massaging of this gland.

OKLAHOMA'S SCHOOL OF MEDICINE.

By Le ROY LONG, M. D., Oklahoma City

It occurs to us that the physicians of the state may be interested in the work and the prospects of the School of Medicine, and we are anxious to have them know what we are doing and what we hope to do.

In the work of the school the very first thing upon which emphasis is placed is efficient and systematic service on the part of the teaching staff. We take the position that to proceed upon any other basis would be not only a mistake, but a great wrong to all concerned—a great wrong to the students who come here for instruction—a greater wrong to the citizenship of our state by sending out men lacking in those capable qualities which should be characteristic of a really valuable physician. It is well understood by all, therefore, that men are on the faculty for but one purpose—to render acceptable service. As we see it, this is a basic essential, for an enthusiastic and able corps of teachers may make up to a great extent for lack of equipment and other facilities.

We are glad to say that this scheme is now being carried out in a really ideal way. In addition to the full-time men at Norman, we have here at Oklahoma City fifty odd active members of the faculty, and there is a perfectly satisfactory esprit de corps. Practically all are doing systematic work, and all are working together for the one purpose of making the very best showing for the school. There are no bickerings, no jealousies apparent. Since our connection with the school we have been gratified by this unselfish spirit of co-operation.

We are endeavoring to impress upon the students that medicine is not a money-making vocation, but a profession that should be dedicated to service to humanity. We are trying to encourage them to have ideals, and to show them that if the medical man will conscientiously work for the realization of an ideal based upon the traditional conception of altruistic service to his fellow being the mere matter of making a living will take care of itself. We realize that this is a heavy undertaking, for all of us know, although we may blush with shame when we think about it, that the spirit of commercialism has, especially of late years, been too often manifest in the ranks of our profession. As long as we have even a few physicians who unblushingly take advantage of the necessities of confiding patients and drive sharp bargains the task of training physicians in embryo is often disheartening. But some of us have enough faith to make us feel like continuing the job, for, God willing, we believe the time is not far distant when our work will bear abundant fruit, and those who have wandered away from the paths of professional rectitude and traded upon the misfortunes of the sick will be forgotten, or, worse, and perhaps more justly, remembered with undisguised disgust.

An essential that we are endeavoring to put into practice is to accept only students qualified in an educational way for the study of medicine. In this day of stress we do not believe it is right to take into our classes men who have not had proper preliminary training; nor do we believe it is right to advance men from one year to another when they have been conditioned. Therefore, there is a weeding out process in the first two years. The medical course is a long and trying ordeal—more so than ever before. We believe that it is manifestly unfair to encourage a poor student and let him drift along to final failure in his last year. It is to avoid this waste of time—this injustice to the poor student—the danger, too, of being tempted to let a weakling “go through” on account of sympathy in the last pinch that the weeding out process is begun early.

Recently an arrangement was made through which a considerable sum of money is made immediately available in connection with the present needs of the School of Medicine. Temporarily, this will place us in a splendid situation. Through this arrangement we will be able to install all the equipment now needed both at Norman and at Oklahoma City.

At present we are operating two hospitals at Oklahoma City—University Hospital and University Emergency Hospital—with an aggregate capacity of 100 beds. In addition, we have clinical arrangements with St. Anthony's Hospital and with several maternity hospitals. This gives the School of Medicine excellent clinical facilities, and this is borne out by a reference to our clinical work during the last term.

The school is now supplied with all the required full-time professors, and, in addition thereto, we have a full-time pathologist and an expert anesthetist on salary in connection with the work of our two hospitals.

After careful consideration, we believe we are justified in making the statement that our work in the School of Medicine, both at Norman and at Oklahoma City, is A grade, but we are in B grade, and we believe we are kept there mainly for the reason that the work of our clinical years is conducted in rented property. We do not believe that the Council on Medical Education looks with favor upon this temporary, unsettled situation of the school—an unfortunate, crippling situation for a department of the University of the great State of Oklahoma.

This brings us to the most important matter in connection with our most urgent need if we are to grow in the future. If Oklahoma University is to have a medical department of the kind she should have—a medical department of real merit and, withal, a source of greatest good to the people of the state, we must have a large clinical hospital at Oklahoma City. Our ideal is a 300 bed hospital with an arrangement through which the counties of the state shall send the indigent sick and crippled and afflicted to us for treatment. In that way we will have a large clinic, and at the same time we believe that we will be able to render a real service to the people. It has been repeatedly demonstrated that at such an institution many afflicted persons who are burdens upon communities in which they live may eventually be relieved and sent back home to take their places as useful, efficient members of society. The readers of the Journal may be of great assistance. We believe that they should take an interest in this important matter—we sincerely believe the most important from the standpoint of added service and of good to the people before the profession of the state today. If each of you will wake up to the opportunity, we will build here the greatest institution of its kind in the Southwest—an institution which will in the years to come be a monument to the unselfish enterprise of our citizenship and the righteous co-operation of our profession.

Before closing we wish to call the attention of the physicians of the state to our facilities for taking care of the sick poor at the nominal rate of \$10.00 per week, straight. There is no extra charge for operating room, anesthetic or laboratory work. We receive patients of all classes except those who have active tuberculosis or a contagious disease, and each patient is placed in the care of the department to which he belongs.

A feature of considerable importance in connection with these clinical cases is the opportunity to consult the several departments in any case. Everything possible is done to correctly diagnose and treat these patients.

Those coming for this service should bear a letter from a physician or from some responsible person to the effect that he is unable to pay for the services of a physician or surgeon. When such patients arrive at Oklahoma City they should go at once to University Hospital, 325 East 4th St. If an ambulance is needed we will have one at station if notified beforehand.

Finally, we hope that the physicians of the state will make it a point to visit the School of Medicine when it is convenient for them to do so. When you come to Oklahoma City, please let us know you are in town. Our doors are always open to you, and we shall be glad to see you. We are anxious to know you; we are anxious for you to know what we are trying to accomplish here, for out of such an association will necessarily come mutual benefits.

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Local news of possible interest to the medical profession, notes on removals, changes in address, deaths and weddings will be gratefully received.

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EDITORIAL**HEALTH PROBLEMS PRODUCED BY SCHOOL CONDITIONS**

In the month of September hundreds of Oklahoma schools, city and rural, will open for the reception of students. Physicians are peculiarly concerned with the rapid rise of morbidity from the commoner infectious diseases just after this time. It seems no amount of publicity and warning of the consequences of admitting infected children to the presence of those uninfected has any weight toward lessening the diseases more commonly prevalent, and we have come to take it largely as a matter of course that these things must be, simply because sporadic efforts to prevent them have failed. The responsibility for these conditions rests with two classes of the people; parents, more or less ignorant or indifferent, and physicians in exactly the same category. The ignorance and indifference of the parent can be met in a small way only when the total to be accomplished is considered; the family physician and the public speaker, through the medium of the school club and patrons' clubs does free and unappreciated work of considerable magnitude along these lines.

The work of many physicians and their intelligent co-operators among the great lay body is often nullified and made inert by the attitude of ignorant and careless physicians who attempt to curry favor with a family or the public by giving opinions counter to the health officer, going so far in some cases as to carry their disputes of diagnosis into courts about as well fitted to pass on the merits of the matter as so many mules. "Be sure you are right and then go ahead" or "Safety First" are slogans apparently never occurring to this class of public servants, who invariably insist on calling a mild scarlet fever measles, mild smallpox chickenpox, etc.

We should not now overlook the fact that one case of measles sent to school too soon will mean an epidemic of that disease, followed by bronchial pneumonia with all its grave consequences.

Children with developed defects in nose, ears and tonsils, teeth and eyes should be treated properly, not only in order to benefit the individual who is thus below standard with his fellows, but to remove from the general midst a source

of constant danger. It should not be forgotten that a child subject to "colds" usually has some underlying defect which may often be remedied by simple treatment; that when this is done the cause of an epidemic of "colds" may be removed from the schoolroom.

There is no occasion for hysteria and excitement in this work, each physician should advise his charges in a cool, sensible way of the dangers of these small and usually neglected things and as a rule his advice will be followed with the net result of benefit to all the public.

DR. JOHN B. MURPHY

August 11th, at Mackinac Island, death claimed Dr. John B. Murphy, who died after acute suffering from aortitis. He was 59 years of age, too young to give up a life so well devoted to the relief of suffering and the advancement of ideas looking toward alleviation of human misery.

The surgical world, especially those who had the advantage of knowing him and having witnessed his work, concede without question his pre-eminence as a leader and teacher. His ability was so great that his lectures, observations and writings were closely followed by those seeking to do better work and a trip to Chicago was not considered complete by any surgeon without having seen and heard Murphy if opportunity presented.

In a long life full of great events in surgical advances he evolved many things of great value to the profession. His first generally known accomplishment was the popularizing of what was called the Murphy button for rapid anastomosis in intestinal and similar work, but the important phases of his life's accomplishments will be found in his pioneering in brain and nerve surgery, and bone and joint work. His findings in these fields stand practically without controversion.

In the death of Murphy the medical profession has lost the greatest teacher it has ever produced while the world has lost one of its great humanitarians.

SAUCE FOR THE GOOSE

"The Board of County Commissioners hereby give notice that propositions from legally qualified judges, clerks, sheriffs, et cetera, will be received up to———. Proposition must set out the sum for which said persons will conduct the business of judge, clerk, sheriff, etc., in the manner provided by law".

The above is exactly how the business of the county would be conducted, if the people should conclude to apply the same rule for selection of officers as many county officers apply for the selection of physicians to care for prisoners, indigents and other county charges. The system we complain of would be perfectly proper if county officers were in the habit of advertising for bids for surgical, medical, drugs and such care of their own families; but they are not, they simply take the position that when they ask for bids, the cheapest man will get the work and the taxpayers will thereby be saved money. The nonsensical idea that medical service to indigents should be placed on the same basis as is the erection of buildings and supply of food to them undoubtedly often results in the selection of incompetent physicians.

ABSTRACTS AND REVIEWS

CONDUCTED BY

DRS. L. F. WATSON AND L. J. MOORMAN, OKLAHOMA CITY.
AND FRED J. WILKEMEYER, MUSKOGEE

A NEW TREATMENT FOR CHANCROIDS

G. R. Livermore, Memphis, Southern Medical Journal, August, 1916, in speaking of the treatment of chaneroids, observes that the many remedies in use is conclusive evidence of the inadequacy of any one of them. In order to effect a cure, it is necessary to eradicate all infection. The actual cautery, nitric acid, etc., will often do this successfully, but if they fail a large amount of necrotic tissue remains that is both a protection and a fertile field for bacterial growth. A drug that will destroy the infection and not injure the tissues is silvol, a protein compound containing 20 per cent silver.

The method consists in cleansing the chaneroid thoroughly with warm sterile water and then covering the entire ulcerated area with silvol crystals. A guaze dressing and bandage are then applied and not removed until the following day. If upon removing the dressing, the chaneroid has not lost its virulent appearance, a second application is resorted to. When silvol is applied to a chaneroid there is a marked stinging sensation, but it is usually not severe and does not last long. The writer states that while silvol is not a specific, it is by far the best remedy he has ever used in the treatment of chaneroids.

THE IMPORTANT ROLE OF THE LYMPHATICS IN ASCENDING RENAL INFECTIONS.

D. E. Eisendrath and J. V. Kahn, Chicago, J. A. M. A., February 19, 1916, observe that the lymphatic capillaries of the periurethral sheath play a most important part in ascending renal infection. The older view, that infection from the lower to the upper urinary tract travels with the lumen of the ureter, that is, against the secretory current, must be abandoned except when the ureter is completely obstructed by a calculus, stricture or external pressure.

In studing experimental infection in animals, the authors have more recently reported the results of over 600 animal autopsies. In tracing the infection upward, every portion of the ureter was cut longitudinally as well as serially. Summarizing, they state that the inflammatory infiltrations follow in a most accurate manner the course of the lymphatics. In the early stages of infection, the infiltration is found in the submucous layer of the bladder, and is especially dense around the smaller vessels. In the lower portion of the ureter, it is most marked also in the submucous coat. A little farther up the periurethral sheath, composed of blood vessels and loose areolar tissue, play the chief role in carrying the infection upward. In the ureter the other coats become invaded from without inward. In the kidney, the infiltration is first seen around the renal vessels which pass into the parenchyma, next in the cortex glomeruli, then the medulla and finally in the more advanced states the infection breaks into the tubules.

This study is of particular interest because it is the first that has ever been undertaken to show how infection extends from the bladder to the kidney.

CONSERVATIVE SURGICAL CORRECTION OF DISPLACEMENTS OF THE COLON

Dr. C. A. L. Reed, Cincinnati, New York Medical Journal, July 15, 1916, discussed constipation due to various forms of mechanical conditions in the intestines. Measures for their relief, he said, were radical and conservative. The radical operations were short circuiting and excision, or a combination of both. They were indicated when no other procedure would reestablish physiological drainage of the intestines. Conservative operation consisted in fixation of the displaced colon to relieve retardative angulation and mechanical interference with circulation. The operation devised by the speaker was called parietal implantation of the colon.

Briefly the method consisted in making a long incision, exploring the abdominal and pelvic viscera for adhesions which are broken up. Dissect the peritoneum away from the transversalis fascia for a distance of three-quarters of an inch along the whole length of the incision. Put the patient in the Trendelenburg position, bringing the transverse colon and omentum out through the incision. Fasten the omentum to the denuded transversalis fascia by stitching the base of the former by its external surface, to the lower margin of the denuded surface of the latter, employing a continuous interruption suture and exercising care to avoid wounding or constricting important omental vessels. Stitch the margin of the upper peritoneal flap to the under surface of the transversalis fascia. Approximate the divided ends of the muscles. Fortify the last line of sutures with a few silkworm gut sutures passed through the superficial fascia, muscle and transversalis fascia. Close the skin with the continuous suture with fine catgut.

The speaker reported 226 consecutive cases of parietal implantation without a death, and sixty-two cases in which the operation was combined with other procedures with six deaths.

The results, so far as functional restoration with consequent good health was concerned, were

reported to be highly satisfactory. Demonstrations by X-rays were presented, showing the implantation intact after more than five years.

ACUTE PERFORATION OF ULCERS OF THE STOMACH AND DUODENUM

M. T. Field, Salem, Mass., Boston Medical and Surgical Journal, June 8, 1916, reported in the New York Medical Journal, considers the symptoms of acute perforation of gastric and duodenal ulcers. He says it occurs most often in adult males who give a history of stomach trouble. Its possibility is not excluded by complete absence of the symptoms of dyspepsia. The most important diagnostic sign is a sudden, severe epigastric pain, followed immediately by signs of spreading peritonitis, which manifests itself through general tenderness and muscular rigidity. Early or first hour tenderness and rigidity are important signs in differentiating acute perforation from appendicitis and other intraabdominal lesions. The first points of maximum tenderness and rigidity, especially in duodenal perforation, are on the right side above and below. Later the rigidity becomes board like over the whole abdomen. Tympany over the liver may occur, but usually is not present. The abdominal pain as a rule is very severe and patients have an anxious expression, but at first the pulse is only slightly accelerated.

SODIUM CITRATE METHOD OF INDIRECT TRANSFUSION OF BLOOD.

W. S. Carter, Galveston, Southern Medical Journal, May, 1916, says the greatest danger in the transfusion of blood is that of hemolysis. That it can be avoided by a preliminary examination of the blood has been well established. The method of Rous and Turner is unquestionably the most desirable. It requires only a drop of blood and the examination can be made within a half-hour.

The method of indirect transfusion which has recently been developed seems to be by far the best as it is so simple that it can be used by any general practitioner. Since the introduction of this method, transfusion need no longer be regarded as a surgical procedure.

It is important that the needle used to withdraw the blood from the donor's vein should be large enough for the blood to flow freely in a continuous stream as soon as the canula is introduced. Aside from the difficulty of getting enough blood, the blood clots in the needle or canula when it flows slowly. Carter's experiments have shown that a strength of 0.2 per cent sodium citrate has been sufficient to prevent coagulation. Ordinarily the amount transfused in man does not exceed 750 cc. It is convenient to use a 2 per cent solution of the sodium citrate, as it simplifies the calculation by mixing it with blood in the ratio of 1 in 10. Watson.

RESUME ON INFECTIOUS DISEASES.

Grancher's idea, "Asepsis in the handling of contagious diseases," seems to be gaining headway—especially in hospital-cared-patients. Grancher's method permits the handling of contagious diseases in the same ward with general nursing. Richardson's Resume of English Hospitals places the percentage of cross infections at 3 per cent. University of Michigan percentage in the first year of operation—2 per cent. In the United States, the University of Michigan, at Evanston and Chicago, have introduced the above method, and Iowa City has one under construction. In the new children's clinic of Vienna the percent of cross infections rose to over 10 per cent. Given the most conscientious aseptic technique of both doctors and nurses, Grancher's method for handling contagious diseases works nicely. The general practitioner cannot use this method except in isolated cases.

It is with some relief one sees disinfection after contagious diseases being discontinued. This method has been in force the past four years in New York. Chapin's statistics for New York show no increase as a result of the discontinuance of disinfection for contagious diseases including bedding disinfection. Providence, Rhode Island, and Chicago are no longer disinfecting. The reviewer can well recall the disgusting use of formaldehyde in jail disinfection and often wondered how the prisoners withstood it. And also seeing the silly use of atomizers sprayed over the soles and shoes of the attending physician. Isolation for a reasonable time, Grancher's method and fresh air and sunshine will do all.

MEASLES.

Epidemiology and Prophylaxis:—Rohmer's analysis of hospital epidemic shows the average case of measles is infectious for at least seven days, that is during the period of invasion and exanthem, but not during desquamation. Raffie's studies show conclusively that closure of schools will effectually control measles epidemic.

Diagnosis:—Grumann believes he has found a further aid for the early diagnosis of measles. He finds on both tonsils linear and punctate white swelling of three mm. length in the neighborhood of the lacunar depressions. They may be present before Koplik spots or with the latter and precede the eruption by one or two days.

WHOOPIING COUGH.

It's a pity this disease is not reportable and isolation insisted upon. Rucker states 10,000 children are sacrificed every year.

Pathology:—Mallory and Horner found cilia of the epithelial cells lining the trachea, bronchi covered with a thick layer of minute bacilli, and believe their situation is characteristic of the disease and explanatory of the cough.

Vaccine Treatment:—Considering the disease, its variability, one can say little for or against the use of vaccine. However, their use does not produce any harmful effects.

DIPHTHERIA.

Statistics and Epidemiology:—Great headway can be made by systematic culturing and isolation. In culturing it is absolutely necessary to touch all parts of the upper respiratory tract; the pharynx may be negative but present in the nose; present on one tonsil and other portions negative, etc. (Walthall). Contact infection, direct or indirect, is the chief method of propagation.

Carriers:—No success made so far in the ridding of carriers of their Kleb's-Loefflers. Over-riding by means of staphylococcic sprays are of no use and dangerous.

Pathology:—Porter and Pratt, in a very excellent communication, conclusively prove that the circulatory collapse is not, as we commonly believed, due to the toxin acting on the vasomotor centre.

Bacteriology:—More success in the treatment with antitoxin will be made, when the general practitioner ceases drawing fine lines of distinction and gives antitoxin without waiting for the culture to prove positive. The laboratory man well knows his limitations, particularly so, since so many men are so hap-hazard in takings swabs. The late Doctors Rotch and John McCollum, taught their students to give antitoxin if there was the slightest suspicion; believing antitoxin had curative powers outside of diphtheria. Fear of anaphylaxis may be disregarded. Dr. John McCollum, who was the pioneer in America in the use of antitoxin and big doses of same, in his thousands of cases, never saw any serious effects.

Cultural Methods:—Conradi and Troch's new culture medium consists of beef serum plus a small percentage of sodium tellurate and calcium alate. They first grow the bacilli on Loeffler's serum three hours and then transfer to the new mixture. The diphtheria bacilli colonies reduced the tellurate a black colony resulting.

Immunology:—The Schick reaction is bound to play a great role. All observers agree it is of great value in determining the amount of diphtheria antitoxin necessary to neutralize the circulating toxin; also of greatest value as a prophylaxis. In the past whole members of the family were given antitoxin; now by means of the Schick test one can accurately measure the amount of antitoxin circulating in the individual. If he has no antitoxin of course antitoxin is introduced.—Abstracted from American Journal Diseases of Children, August, 1916; Alfred H. Beifield & Walthall, same issue. Wilkiemyer.

PERSONAL AND GENERAL NEWS

- Dr. A. E. Martin, Marietta, is visiting in Canada.
- Dr. E. Nunnery, Granite, has moved to Roosevelt.
- Dr. C. W. Jamison, Alva, has moved to Stillwater.
- Dr. G. W. Stewart, Hobart, is taking a vacation in Arizona.
- Dr. R. A. Workman, Woodward, is automobiling in Colorado.
- Dr. T. C. White, Canute, was reported seriously ill in August.
- Dr. H. B. Ames, Burlington, is doing special work in Chicago.
- Dr. Jackson Broshears, Lawton, spent his vacation in Colorado.
- Dr. J. W. Pollard, Bartlesville, is in Albuquerque, New Mexico.
- Dr. B. B. Dawson and family motored to Hot Springs in August.
- Dr. S. P. Strother, Altus, visited the Chicago clinics in August.
- Dr. T. H. Flesher, Edmund, visited the Mayo Clinics in August.
- Dr. E. Forrest Hayden, Tulsa, visited the Mayo clinics in August.
- Dr. A. W. Roth, took a vacation in August in Estes Park, Colorado.
- Dr. and Mrs. L. A. Hahn, Guthrie, visited Colorado Springs in August.
- Dr. J. J. Fraley, Hominy, left for Colorado for a hunting trip in August.
- Dr. A. E. Martin, Marietta, is reported seriously ill in July and August.
- Dr. G. L. Harker, Elk City, returned from the Chicago clinics in August.
- Dr. J. I. Derr, Waurika, visited Chicago and New York Clinics in August.
- Dr. A. W. White, Oklahoma City, visited Luddington, Michigan, in August.
- Dr. and Mrs. F. Y. Cronk, Guthrie, spent part of August in Atlantic City.
- Dr. and Mrs. J. S. Little, Eufaula, returned from New York City in August.
- Dr. C. T. White, Clinton, after a serious illness is recuperating in New Mexico.
- Dr. A. D. Johannes, Oklahoma, City did special work in Ann Arbor in August.

Dr. W. W. Rucks, Guthrie, and family are sunnmering at Palmer Lake, Colorado.

Dr. and Mrs. W. W. Brodie, Tulsa, visited the Pacific coast and Canada in August.

Dr. Walter H. Howard, Chelsea, suffered the loss of an automobile by theft recently.

Dr. W. E. Lamerton, Enid, visited Corpus Christi and southern Texas points in July.

Dr. A. M. Marshall and family, Chandler, visited their old Missouri home in August.

Dr. H. K. Speed, Sayre, visited Washington, New York and Chicago clinics in August.

Dr. C. O. Von Wedel, Oklahoma City, spent August visiting New York and Boston clinics.

Dr. R. S. Wagner and family, Tulsa, visited New Jersey and other eastern states in August.

Dr. J. B. Osborn, Jr., and family, Frederick, Oklahoma, visited Colorado Springs in August.

Dr. W. H. Livermore, Chickasha, and family visited Illinois and Lake Michigan resorts in July.

Dr. Thos. T. Matlock, Carmen, has returned from Chicago where he has been doing special work.

Dr. J. J. Caviness, Hedrick, has moved to Altus and formed a partnership with **Dr. David Garret**.

Dr. and Mrs. Chas. W. Heitzman, Muskogee, spent August and September in California and Canada.

Dr. J. L. Adams, Pryor, recently suffered considerable damage to his fixtures when his office caught fire.

Dr. G. A. Boyle, Enid, visited the Mayo Clinics in August, incidentally taking a fishing trip while away.

Dr. J. W. Shelton, Pauls Valley, has moved to Ardmore, where he will do eye, ear, nose and throat work.

Dr. M. M. McCord, formerly of Carrier, visited Indiana in August. He will locate in Helena in September.

Dr. H. L. Dalby, Wilburton, made an automobile trip to Colorado and other western states in July and August.

Dr. Floyd Warterfield, Muskogee, attended the Rochester clinics in August. Mrs. Warterfield accompanied him.

Drs. J. R. Bryce, Snyder, and **Edwin Hollis**, of Hollis, have formed a partnership; they will practice in Snyder.

Dr. J. D. Warford, Erick, and **Miss Pearl Memhard**, of Clovis, New Mexico, were married in Amarillo, Texas, August 12.

Dr. S. N. Mayberry, Enid, returned in August from a trip to Minnesota, where his family has a cottage for the summer.

Dr. H. M. Weinberg, Stroud, is under bond from Lincoln County Court, charged with practicing medicine without a license.

Drs. W. A. Fuqua, Frederick, and **Harper Wright**, Grandfield, have formed a partnership and will practice in the former place.

Dr. C. H. Lockwood, Medford, accompanied by his family, spent July and August in Chicago, **Dr. Lockwood** doing special work.

Dr. P. A. Mangan, Tulsa, Food and Milk Inspector, has returned from eastern centers, where he has been making a study of food and milk problems.

Dr. E. Y. Bass, Talala, narrowly escaped a serious injury in an attempt to climb between two freight cars. His foot was caught and painfully mashed.

Dr. S. A. Looper, Garber, has been assigned as resident physician in the New Orleans Eye, Ear, Nose and Throat Hospital. He will spend one year in that city.

Dr. William Patton Fite, who recently graduated from the University of Virginia, has located in Muskogee, forming a partnership with his father, **Dr. F. B. Fite**.

Miss Mac Brown, Tulsa, has filed a writ of mandamus in Tulsa county requiring the Tulsa Hospital Association to show cause why a diploma should not be issued her by that institution.

Dr. L. L. Patterson, Arapaho, a member of the Custer County Medical Society, died in Clinton Hospital July 22 from typhoid fever. **Dr. Patterson** was 34 years of age at the time of his death.

Dr. John I. Gaston, Madill, and **Mrs. Eula Boyd Mullins**, Oklahoma City, were married in the latter place August 14. After a trip to eastern points they will return to Madill for their future home.

Dr. J. M. Workman, Woodward, officially advises his friends that he holds the record on black bass in Woodward county. He states the one he caught weighed nine pounds and that he is now ready to compete with all comers.

Dr. R. T. Castleberry, Ada, narrowly escaped death when a farmer with whom, it is said, he had had trouble fired a shotgun at him at close range. Castleberry retaliated by shooting the man through the arm and lower abdomen.

Dr. S. D. Hawley, Superintendent of Health, Tulsa, recently issued an order ending the custom of tenting in the city limits. Hereafter no one will be permitted to live in tents. The order is a result of the usual bad sanitary conditions surrounding such places.

Drs. Garrett, Caviness, Rutland and Abernethy, Altus, announce the opening of a hospital in the near future. The surgical work will be in charge of Dr. Garrett; laboratory, Dr. Caviness, and eye, ear, nose, and throat work will be handled by Drs. Rutland and Abernethy.

Dr. James L. Shuler, Durant, has been "downed," but it required the combined efforts of a Ford and a pair of mules to accomplish the result. The Ford scared the team and the team retaliated by hurriedly backing a buggy into the doctor. The injuries are not serious.

Dr. E. E. Flagg, of Mooreland, was instantly killed August 18, when an automobile which he was driving plunged from a 15 foot embankment. Dr. Flagg and his wife were just starting on a vacation and after leaving Mooreland a short distance, the car plunged into a ditch washed by recent rains. Mrs. Flagg was severely injured.

Sapulpa is enjoying a novel situation. Two health officers are exercising the functions of the same office, or attempting to do so. Dr. A. A. Avery holds the seal and commission and contends that a Dr. Boggs cannot take possession by summary appointment; the matter came to a focus when the new appointee issued some sewer connecting notices, which were held to be void.

Ohio cities, in their search for increased revenues, are assessing special taxes against physicians' lawyers, dentists, bankers, artists, etc., on the theory that they belong to "non-productive professions." It is said the proposed tax runs from \$5.00 a year on some professions up to \$300.00 for bankers. \$5.00 and \$10.00 a year is the suggested amount for physicians. Ohio physicians might consider publishing a notice that they will, after the adoption of any such foolishness, raise their visiting rates by about \$1.00 a call.

Osteopaths in the Kansas City convention, it is said, decided that advertising was permissible provided they live up to the claims set forth. We can already see the end of such foolish determination. In the first place, there is no one to determine if the claims are lived up to—the rival of the claimer cannot be the judge, so we may expect to see "Dr. Jerkem" and "Dr. Adjusticatorum" carrying their superb ability to jerk cancer of the breast or uterus or adjust luetic and Neisserian infections from their patients, via the printers ink route. We will not be surprised to see one reading "Wonderful Bargain! Beginning at 9 o'clock sharp Tuesday. First Come, First Served. Eclampsia, Elephantiasis, Morphine and Drug Addictions, Osteomyelitis and Appendicitis adjusted most skilfully. 10 per cent off for cash. Examination Free. Dr. Boner Spinepopper."

COUNTY SOCIETIES

McIntosh County Medical Society met in Checotah, August 8th, with the following program: The Importance of Promptness of Diagnosis in a Few Surgical Conditions, Dr. A. F. Watson, McAlester. Typhoid Fever—General Discussion—Opened by Dr. J. D. Watkins. Infantile Paralysis—General Discussion. Clinic—Case reports. Dr. Watkins served a supper to the visiting physicians.

The Oklahoma Central Medical Association met in El Reno July 18. The following program was rendered. 9:00 a. m.—Symposium on Oral Hygiene and Mouth Infections. Oral Hygiene and Its Relation to Ill Health—Dr. L. G. Mitchell, Oklahoma City. Alveolar Infections in Relation to Systemic Disease—Illustrated by lantern slides, Dr. J. R. Caughran, Oklahoma City. Vocal Infections and Nephritis—Illustrated by lantern slides, Dr. W. R. Livermore, Chickasha. The Diagnosis and Treatment of Proctitis—Dr. W. J. Wallace, Oklahoma City. The Newer Methods of Treating Hemorrhoids—Dr. J. M. Cooper, Oklahoma City. 11:00 a. m. to 2:00 p. m.—Clinics. 2:00 p. m.—The Intestinal Localization of Epilepsy—Illustrated by lantern slides, Dr. W. L. Kendall, Enid. The Surgical Relief of Epilepsy—with case report, Dr. C. Von Wedel, Oklahoma City. The Diagnosis of Infantile Paralysis—Dr. C. J. Fishman, Oklahoma City. The Treatment of Infantile Paralysis—Dr. R. L. Hull, Oklahoma City.

CORRESPONDENCE AND MISCELLANEOUS

ON INFANTILE PARALYSIS.

The panic about infantile paralysis which is sweeping the country is quite true to the traits of the American people to run to wild extremes of excitement under impulse of the first thought about a matter suddenly brought to their minds. The disease is not to be discounted of course and many of the precautions which are being advocated and enforced against its spread are well taken. But when it is brought to mind that the simple old-fashioned disease of measles cost more lives per week during many weeks in New York city in the past year than the new terror cost last week, it becomes plain that the alarm which people are falling for about the paralysis peril is at least a bit inconsistent.—*Okmulgee Democrat*.

THE TURK AS ENEMY.

The student of race characteristics would have difficulty in finding a knottier problem than the Turk. Our war office has just commented on his chivalrous and humane treatment of the garrison of Kut.

Turkish officers have taken advantage of a truce now and then to apologize for the scandalous irregularities committed by their Arab allies; they have shown a quite remarkable consideration in such matters as the return of lost kits; they have given to our wounded in their hands every comfort available, and to our officer prisoners every honor to which their rank entitles them.

Men returned from Gallipoli tell the same tale. They will remember the Turk as an enemy who would not fire on the Red Cross, and who showed a regard for the decencies of war from which his allies in Europe might well learn.

Yet this people that has so well preserved the tradition of knightly fighting is responsible for the most dreadful massacres that modern times have known. The troops who would scorn to purloin a wounded British soldier's kit will apparently drown a shipload of Armenian women and children without a qualm. The Turk, it seems, is a Jekyll to his equals and a Hyde to those he considers his inferiors.—Manchester Guardian.—*Oklahoman*.

BATTLE CREEK SANITARIUM GOLDEN JUBILEE

Names sometimes designate without adequately describing. Such is the case with the Battle Creek Sanitarium which will celebrate the fiftieth anniversary of its founding on October 3, 4 and 5. This institution is a sanitarium, with all the most modern and scientific equipment for diagnosing and curing disease. But it is much more. From its inception, it has been in the forefront of the movement for natural, rational and physiologic methods in the treatment of the sick. Primarily, indeed, its function has been educational—the teaching of right principles of living as not only aiding in curing sickness but preventing its return as well. The Sanitarium therefore has taken an active and a leading part in movements for public sanitation, for diet reform, to curb the liquor evil, to check tuberculosis, to abolish child labor and more especially to study tendencies toward race degeneracy and to point out eugenic and other remedies for them.

Being purely a charity and having no dividends to pay to stockholders, it has been able in the half century of its existence to spend over \$1,400,000 for the care of the indigent sick.

The program for the celebration includes a huge banquet, receptions, a big outdoor spectacle, a street pageant, with historical and allegorical floats, a race betterment exhibit, conferences on child labor, enginies, tuberculosis and other sociological and medical problems of the day, with numerous speakers of prominence, and a Health Chautauqua.

All Physicians are invited to come.

THE PHYSICIAN THE TRUE CHRISTIAN SCIENTIST.*

"During the past six months, 216 surgeons have been wounded, 119 killed and 130 missing in the German army, while 260 surgeons have been wounded, ninety killed and 460 missing in the French army; the proportion in the other armies doubtless equals these numbers, a sad record, indeed, and glorious testimony to the heroic and patriotic devotion of men who amid shot and shell have calmly done their duty without the excitement of combat to render them oblivious to danger. The Iron Cross has been conferred on over 2,700 medical officers for acts of heroism in attending the wounded under fire."

*John B. Murphy in *Medical Pickwick*.

IMPORTANT FACTS CONCERNING INDUSTRIAL ACCIDENT COMPENSATION IN OHIO

During the first 18 months the compulsory provision of the Ohio workmen's compensation was in effect:

Nearly \$750,000 was paid out for medical and hospital attention by the Industrial Commission and by employers carrying their own insurance under the state plan.

Claims of 100,003 injured employees or families of deceased employees were allowed.

The total amount of money awarded from state insurance fund was \$4,401,986.16.

\$46.07 was the average award for medical and hospital expenses not including the hospital and medical expense of employers under the safe insurance plan.

\$200, the maximum amount, was awarded for hospital and medical expenses in 16 of the 616 fatal cases in which awards were made.

Infection was reported as having occurred in 9,024 of the 100,003 accidents—*nearly 10 per cent*.

Thirty-seven cases in which infection was reported resulted fatally, 23 of them occurring in connection with trivial injuries.

Three hundred and eighty-five claims were allowed for total or partial loss of vision in one or both eyes. Of this number, 69 were the result of infection.

The hour of most frequent occurrence of accident in the forenoon was from 10 to 10:59 and in the afternoon, from 3 to 3:59.

More accidents occurred on Monday than on any other day in the week.

Falling and shifting objects, with a total of 36,193 victims, were the cause of more accidents than any other factor enumerated in cause class.

Awards were made for accidents in every county in Ohio. Cuyahoga, with 24,750 claims and \$903,682.48 in awards, heads the lists of counties.

The total number of claims disallowed by the commission was 7,986.—*Ohio State Medical Journal*.

ANNOYING LABORATORY EXPERIENCES.

The directors of the laboratories of the State Board of Health are often surprised over things sent to them for examination, and more frequently at the carelessness shown by intelligent physicians and people in the preparation, packing and shipment of specimens, otherwise entirely proper and legitimate. For instance, within the last few days a large handsome, unmuzzled Collie dog came by express to the Bacteriological Laboratory, without the name of the sender or a word of information as to the charges against him, or instructions as to what should be done with him. Thirty-six hours later a letter was received from a prominent public official, the owner, stating that the dog had bitten one or more persons, was suspected of being rabid, and asking that he be placed under observation until it could be determined if his victims needed the Pasteur treatment. The dog came from a distant part of the State, the trip requiring changes of trains and roads, with no warning on the crate that there was anything suspicious as to either his health or character, in the course of which a number of people necessarily handled him and incurred the danger of possible exposure to rabies. Suspected dogs, horses and cows have been sent in before, but all of these were muzzled and in the care of custodians, who could care for the poor animals and prevent danger to others. As all the workers in this Laboratory are women, and have no menagerie for the care of animals, no cemetery for the disposal of their remains or funds for the maintenance of such activities if they had them, the dilemma of these young scientists, accustomed to face and avoid recognized laboratory dangers constantly with calm courage, over the reception of this live, anonymous but suspected dog, may be easily imagined. Often the express man turns up, carrying at the end of a long pole an old bucket, basket or other receptacle, containing the decayed remainder of what was a dog head two or three days ago shipped without the caution of packing in ice, with brain, Negri bodies, if really from a rabid animal, bones and flesh, only a malodorous, nauseating maggot-ridden mass, which might just as well have been left on the animal so far as any good could come from its examination.

But these are only a few samples of their troubles, caused by the carelessness or thoughtlessness of physicians who know better, and yet constantly send in specimens in such a way as to destroy any chance of getting satisfactory results from the laboratories by the way they procure, prepare or ship. Almost every day specimens of diluted feces arrive in tuberculosis containers, dirty putum in containers intended for hookworm, or diphtheria specimens in either of the ones mentioned, or in an imperfectly cleaned morphine or quinine bottle; and, probably, worst of all, a day seldom passes without a package coming in with no name or address on it. Dr. Curry has similar experiences in the Water Laboratory. From one town, to which he had sent carefully packed and sterilized containers, with full printed instructions, as is done for all who ask them, he received specimens day after day in poorly cleaned cocoa-cola bottles. One cannot but feel sorry for the patient or community dependent upon such doctors in their days of stress; good fellows, no doubt, and meaning well, but the none less a constant source of danger to those who must rely upon them; and it is from this careless or ignorant element in the profession that most of the criticism about laboratories and all similar public activities comes.—*Kentucky Medical Journal*.

ON ALCOHOL.

I was with the relief column that moved on to Ladysmith. It was an extremely trying time apart from the heat and the weather. In that column of 30,000 men, the first who dropped out were not the tall men, nor the short men, but the drinkers, and they dropped out as clearly as if they had been labeled with a big letter on their backs. Having spent the greater part of my life in operating, I can assure you that the person of all others that I dread to see enter the operating theatre is the drinker.—Frederick Treves.

As a citizen I further note that alcohol is one of the most dreadful and insidious of all corrupting agents known to men in debauching legislatures, and robbing our citizens of the results of their labors at the ballot box, making a government of the people, by the people, for the people a farcical phrase while king alcohol sits enthroned in the legislative hall.—Howard A. Kelly.

Alcoholic intoxication increases the susceptibility of animals to many infections, and influences unfavorably the process of immunization. Pregnant rabbits repeatedly intoxicated by alcohol are likely to abort, and to die soon afterwards from some accidental infection. Many of their young die a few days after birth.—William H. Welch.

Out of every 100 patients I have charge of at the London Hospital, 70 per cent. directly owe their ill health to alcohol.—Andrew Clark.—*Medical Review of Reviews*.

HEALTH INSURANCE FOR WAGE EARNERS

A death rate for American wage earners twice that of professional men; the prevalence of high sickness rates; the need among workers of better medical care and of a systematic method of meeting the wage loss incident to sickness; and the necessity for more active work in the prevention of disease are the corner stones of the case for compulsory health insurance presented in the brief just published in New York by the American Association for Labor Legislation. This situation, it is pointed out, cannot be met fully by existing agencies, and can only be properly remedied by a system of health insurance embracing all wage earners and dividing the cost among employee, employer and the state.

The great amount of sickness in the homes of the poor causes an average loss by each wage-earner of 9 days a year, and involves annually a national wage loss of approximately \$500,000,000. Notwithstanding the greater prevalence of tuberculosis among wage-earners, their early susceptibility to the degenerative diseases of middle life, and the excessive death rate among the industrial population, workers often are unable to secure the medical attention they require. In Rochester, New York, it was found that 39 per cent of the sickness cases were not under a doctor's supervision; in a city like Boston, Massachusetts, one-fourth of the population, it is estimated, are unable to pay the fees of a private physician.

The lowered vitality and the poverty created by present day conditions it is claimed can only be checked by a system of health insurance, which for a small sum divided among employer, worker and state, will bring medical care to the wage-earner and his family, will assure for a maximum of 26 weeks in a year a weekly payment of 2-3 of wages during the breadwinner's illness and in addition a small funeral benefit should be due. "Compulsory health insurance," concludes the brief, "is an economical means for providing adequately for the sick wage-earner, and will prove a mighty force for the inauguration of a comprehensive campaign for health conservation."

MERCURIALIZED SERUM IN SYPHILIS

Mercurialized Serum represents an important advance in the administration of mercury for the treatment of cerebral and systemic syphilis. In cerebral syphilis the spirochetes are located in the cerebrospinal system and are unaffected by the intravenous or other use of the usual antisypilitics. Dr. C. M. Byrnes, of John Hopkins University, has discovered that bichloride of mercury loses its corrosive properties and may be administered intraspinally if dissolved in the proper amount of horse serum, thus bringing this powerful antisypilitic remedy in direct contact with the spirochetes in the intraspinal and intracerebral regions. Intravenous injections of mercurialized serum are also employed for the treatment of systemic syphilis.

INTRASPINAL TREATMENT

For intraspinal injection, the H. K. Mulford Company furnishes mercurialized serum in tube of 30 cc., containing 0.0013 Gm. (1-50 gr.) Mercuric Chloride, known as Mercurialized Serum No. 1 in tubes of 30 c. c., containing 0.0026 Gm. (1-25 gr.) Mercuric Chloride known as Mercurialized Serum No. 2; in ten 30 c. c. ampuls, each containing 0.0013 Gm. (1-50 gr.) Mercuric Chloride, known as Mercurialized Serum No. 3 (Hospital size), and in ten 30 c. c. ampuls, each containing 0.0026 Gm. (1-25 gr.) Mercuric Chloride, known as Mercurialized Serum No. 4 (Hospital size).

INTRAVENOUS TREATMENT

Lloyd Thompson, Ph. B., M. D., of Hot Springs, Arkansas, in a preliminary report, published in the Journal of the American Medical Association (May 1, 1915, page 471) reports administering mercurialized serum intravenously, without the occurrence of phlebitis and periphlebitis. While not recommending mercurialized serum in all cases of syphilis, he finds it of great advantage where quick results are imperative and to overcome the great pain and irritation following intramuscular injections of mercury.

The preliminary report comprises eight cases, in which sixty-six injections were made altogether, and in no case was there the slightest amount of phlebitis. Dr. Thompson states that it is not necessary to use autogenous serum. He prepared a solution of mercuric chloride of such strength that each cubic centimeter contained 22 milligrams (1-3 grain) of the salt. This solution was divided for dosage as convenient. The initial dose in all cases was 1-75 c. c. or 5.5 mg. (1-12 grain) of mercuric chloride. This was gradually increased to 7 c. c. or 22 milligrams (1-3 grain). Quite severe pytalism occurred in one case after a total amount of 131 milligrams (1 5-6 grains) had been administered; and three of the other cases showed slight symptoms of pytalism after a total amount of 2 2-3 grains had been administered. The injections were then discontinued. While bichloride of mercury, combined with normal serum, is non-corrosive, it should be remembered that it is just as poisonous as an aqueous solution of mercuric chloride and therefore, its dosage should be reckoned the same as that of mercuric chloride.

To supply the demand for mercurialized serum to be used intravenously, the H. K. Mulford Company is furnishing mercurialized serum in sealed ampuls, using for that purpose normal serum from the horse. These syringes are of two strengths, namely, 1-12 grain and 1-6 grain.

REPORT STATE BOARD MEDICAL EXAMINERS

EXAMINATION.

July 11-12, 1916.

Samuel Jackson Bradfield,	Bartlesville, Okla.	Licensed
Logan I Evans,	Drumright, Okla.	Licensed
Henry J. Weedn,	Sasakwa, Okla.	Licensed
Wann Langston,	Oklahoma City, Okla.	Licensed
Lee Roy Willhite,	Oklahoma City, Okla.	Licensed
Howard Leonard Ree,	Oklahoma City, Okla.	Licensed
Arthur Winfield Nunnery,	Granite, Okla.	Licensed
William M. Leslie,	Arnett, Okla.	Licensed
Leo Alonzo Berrey,	Seward, Okla.	Licensed
Roy Abner Webb,	Oklahoma City, Okla.	Licensed
George Molton Holcombe,	Stonewall, Okla.	Licensed
Joseph Edwin Hollis,	Hollis, Okla.	Licensed
Frank Gleen Francisco,	Enid, Okla.	Licensed
Gerard F. Van de Sand,	Chicago, Ill.	Licensed
Ben Eben Cutler,	Grove City, Pa.	Licensed
Park Hinds Medearis,	Westville, Okla.	Licensed
Barton Hiram Watkins,	Gotebo, Okla.	Licensed
Arthur Maynard Bacon,	Ardmore, Okla.	Licensed
Henry Jefferson Watson,	Pauls Valley, Okla.	Licensed
Roy Lewis Pendergraft,	Hollis, Okla.	Licensed
Frank L. Powers,	Tulsa, Okla.	Licensed
Jesse Benjamin Hollis,	Hollis, Okla.	Licensed
Chonner Polk Chumley,	Norman, Okla.	Licensed
William Patton Fite,	Muskogee, Okla.	Licensed
James Grady Harris,	Muskogee, Okla.	Licensed
Earl Claxton Lightfoot,	Carona, Kas.	Licensed
James Pendleton Webb,	Devol, Okla.	Licensed
O. B. White,	Oklahoma City, Okla.	Licensed
Jasper E. Wilkerson,	Connersville, Okla.	Licensed

LICENSED BY RECIPROCITY

July 11-12, 1916

LeRoy Worth Baxter,	Tulsa, Okla.	Kansas
Wm. Ernest Balsinger,	Oklahoma City, Okla.	Texas
Otis White Sedgwick,	Alva, Okla.	Vermont
Isaac Wesley Bolinger,	Henryetta, Okla.	Arkansas
James Fleming Musser,	Broken Bow, Okla.	Arkansas
John Patterson Bishop,	Carrier, Okla.	Nebraska
Samuel Ray Evans,	Stilwell, Okla.	Texas
Andy Singleton Melton,	Forgan, Okla.	Arkansas
Hamilton Neal Lusk,	Goldthwaite, Tex.	Texas
Rufus Hansen Sherrill,	Broken Bow, Okla.	Arkansas
Philip Leigh Lathrop,	Blackwell, Okla.	Kansas
Ersline D. Johnson,	Sapulpa, Okla.	Tennessee
Leland Samuel Larimore,	Blackwell, Okla.	Kansas
Francis Marion Crume,	Lark, Okla.	Texas
Wm. Oscar Pool,	Wynnewood, Okla.	Missouri

RE-REGISTRATION.

W. C. Barnard,	Seneca, Mo
C. C. Buttram,	Muskogee, Okla.
C. G. Mitchell,	Claremore, Okla.
W. H. Ford,	Kingston, Okla.
J. T. Mitchell,	Yale, Okla.

RALPH V. SMITH, Secretary.

NEW AND NONOFFICIAL REMEDIES.

Vitalait Starter.—A culture in vials of the *Bacillus bulgaricus* and the *Streptococcus acidus* Bacterii in symbiosis. It is intended for the home preparation of fermented milk. Sufficient to prepare from 1 to 3 quarts of fermented milk is sent on request of the physician to the patient twice a week. The Vitalait Laboratory, Inc., Newton Centre, Mass. (Journal A. M. A., July 15, 1916, p. 203.)

PROPAGANDA FOR REFORM.

Aromatic Spirits of Ammonia.—This is an old fashioned complex mixture. Its reputation has little scientific basis. Its effects probably are psychic, in the main. Such effects might be expected from the irritation of the nasal mucosa by the ammonia and to the flavor and odor of the lemon, lavender and nutmeg oils. The physical effect is probably due to the alcohol, through the ammonium carbonate and uncombined ammonia may have some restorative action by the irritation of the gastric mucosa or by their neutralization of nauseating acids in the stomach. When the effects of ammonium carbonate are desired, this is better given in aqueous solution. When the effects of alcohol are desired, whiskey is to be preferred (Journal A. M. A., July 1, 1916, P. 65).

The Pharmacopoeia Revision.—As usual the Pharmacopoeia about to be issued will be antiquated when it comes out. Some of the drugs in it will have become more or less obsolete, while many new ones which have proven of value will not be there. Since all the publications of the A. M. A. are issued promptly and in excellent style, and are complete, correct and up to date, it is suggested that the U. S. P. should be taken over by the A. M. A., and be henceforth published by it. It may be extreme to say that the world would be almost as happy without a Pharmacopoeia, but at least we could get along very nicely with a Pharmacopoeia about one-half the size of the present one. A good deal of the matter it contains is quite superfluous and its deletion would prove distinctly advantageous to (1) the book, (2) to the medical profession, (3) to the pharmaceutical profession and (4) last but not least, to the students of medicine and pharmacy (Critic and Guide, July 1916, p. 239).

Wine of Cardui Verdict.—Anent the verdict in the recent "Wine of Cardui trial" awarding one cent damages to the Chattanooga Medicine Company, a medical journal offers condolences to the American Medical Association, declares that the verdict is "a very decided victory for the 'patent medicine' association," and asks "is publicity the way to accomplish the true end"? The outcome of the case was a moral victory for the Association and publicity is the only rational means of attacking the nostrum evil, whether of the "patent medicine" or of the "ethical proprietary" variety. Until the public is given definite and specific facts no great strides will be made in preventing unscrupulous cupidity from preying on the sick and suffering. The faith of the public in patent medicines of all sorts continues because no small part of the medical profession is itself still under the blight of the "patent medicine" business—albeit the preparations in question are euphemistically spoken of as "ethical proprietaries" (Jour. A. M. A., July 15, 1916, p. 206).

Cocaine Substitutes.—Treasury Decision 2194 places "alpha and beta eucaine or any of their salts or any synthetic substitute for them" under the provisions of the so-called Harrison Narcotic Law. To this ruling, the Farbwerke-Hoechst Company, the manufacturers of novocain, a synthetic substitute for cocain, took exception and, by agreement, a test case was argued before the United States District Court of New York. It is reported that the court took the case from the jury and ordered a verdict for the Farbwerke-Hoechst Company on technical grounds (Jour. A. M. A., July 15, 1916, p. 208).

Aromatic Spirits of Ammonia in Shock.—Horatio C. Wood, Jr., explains that any stimulating effect which may be observed after the oral administration of aromatic spirits of ammonia is due either to a psychic effect or to its local irritant action on the gastric mucosa, just as the irritation by ammonium carbonate, in the form of smelling salts, of the mucous membrane of the nose may reflexly excite the medulla (Jour. A. M. A., July 15, 1916, P. 231).

Phenol Antidotes.—Various substances, fixed oils, glycerin, diluted sulphuric acid, the soluble sulphates of the alkalis and alkali earths, have been recommended as antidotes or prophylactics of phenol poisoning. M. I. Wilbert discusses the value, or lack of value, of the various reagents proposed as antidotes to phenol poisoning. He points out that glycerin will not prevent the production of gangrene or the absorption of phenol. Wilbert points out that the other substances mentioned have been found inefficient as detoxicants for phenol, and in many instances distinctly harmful. He further notes that, while the value of alcohol as an antidote for phenol poisoning has been scientifically disproved, yet even as late as 1915, the fallacy that ethyl alcohol is an antidote to phenol has been embodied in state laws designed to restrict the sale of phenol. Recent investigation, carried out in the Hygienic Laboratory, shows that in the presence of water neither alcohol nor glycerin has any detoxicating effect on phenol (Jour. A. M. A., July 15, 1916, p. 233).

Poisoning from Lead Paints.—The reports of the British departmental committee, appointed to investigate the dangers of the use of lead compounds in the painting of buildings, shows the principal source of poisoning to be dust, produced during the mixing of dry, white lead with oil and in the dry rubbing down process. While the first danger is done away with by the use of ready mixed paints, the committee proposes drastic legislation to remedy the second evil. The committee recommends the enactment of a law prohibiting the importation, sale or use of any paint material containing more than 5 per cent. of its dry weight of soluble lead compounds (Jour. A. M. A., July 15, 1916, p. 234).

Hexamethylenamin in Anterior Poliomyelitis.—It has been shown that hexamethylenamin has no germicidal activities, except in an acid medium. Therefore, it is of special value only in infection of the pelvis of the kidney, ureters, bladder and uretra when the urine is acid. It cannot be expected to exert germicidal activity in the spinal fluid, which is alkaline and hence is of no value in the treatment of anterior poliomyelitis (Jour. A. M. A., July 22, 1916, p. 309).

BOYHOOD REMINISCENCES

I was just a little boy,
 Not much bigger than a toy,
 But I could eat green apples all day long;
 Then my stomach began to ache,
 As my feet to fire they'd bake,
 It was paregoric times in Texas then.

Roasted peanuts tasted fine,
 But I ate green ones from the vine,
 Until it seemed to me that I would surely bust;
 Then the peanuts began to swell,
 And my stomach gave me H—I,
 It was paregoric time in Texas then.

Green melons from the neighbor's vine,
 Oft times I could not tell from mine,
 In fact I really thought they were the best:
 Until Ipicae was placed in one,
 Then I felt a kinder grum,
 It was paregoric time in Texas then.

"He is sun stroke," the doctor said,
 As he stroked my aching head,
 "He has had malaria for quite awhile," my mother said;
 But that neighbor began to smile,
 As I lay limp on the straw pile,
 It was paregoric time in Texas then.

I've never liked that neighbor since,
 I'll never again go near his fence,
 No matter how good the melons look to me:
 For without that stomach ache,
 I can get along first rate,
 It is paregoric time in Texas now.

When I was some bigger lad,
 My trouble was still quite as bad,
 For I could not quite give up the chase;
 But Croten oil was what I got,
 When next I visited that terrible spot,
 It was paregoric time in Texas then.

I got married along in ninety-five,
 To help keep the spirits alive,
 It seemed to be the best for me to do:
 But the strangest thing you see,
 A babe had come to live with me.
 It was paregoric time in Texas then.

—J. W. Echols.

NEW BOOKS

In this department publications sent THE JOURNAL will be acknowledged as they are received. Reviews of new publications will be made only as space and time permit. Publishers are requested to bear this in mind in forwarding books, etc., for review.

A TEXT-BOOK OF THE PRACTICE OF MEDICINE

A Text-Book of The Practice of Medicine: By James M. Anders, M. D., Ph. D., LL. D., Professor of Medicine and Clinical Medicine, Medico-Chirurgical College, Philadelphia. Twelfth Edition Thoroughly Revised. Octavo of 1336 pages, fully illustrated. Philadelphia and London: W. B. Saunders Company, 1915. Cloth, \$5.50 net; Half Morocco, \$7.00 net.

This edition of Anders, in keeping with the former excellence of its predecessors, has added new matter pertaining to Colon Bacillus Infections; Large-cell Splenomegaly; Tuberculosis of the Thyroid Gland; Vagotomy and Hypophyseal Obesity. Many subjects have been partly rewritten, among those of especial interest to the practitioner being Diabetes Mellitus; Hydrothorax; Gastro-enterop-tosis; Acute Anterior Poliomyelitis; Neosalvarsan; Schick's Test and Chronic Pericholecystic Adhesions in Gall-stones. The book remains what it has always been, a safe guide to the student and practitioner and is as abreast with the times and rapid changes as any text-book of the same class.

OFFICERS OF OKLAHOMA STATE MEDICAL ASSOCIATION—ELECTION MAY 11, 1916.

Meeting Place—Lawton-Medicine Park, May —, 1917.

President, 1916-17—Dr. Chas. R. Hume, Anadarko.

President-elect, 1917-18—Dr. W. Albert Cook, Tulsa.

1st Vice-President—Dr. Fowler Border, Mangum; 2nd Vice-President—Dr. A. R. Lewis, Ryan;
3rd Vice-President—Dr. Horace Reed, Oklahoma City.

Secretary-Treasurer-Editor—Dr. C. A. Thompson, Muskogee.

Delegates to American Medical Association—Dr. John Riley, Oklahoma City, 1917; Dr. M. A. Kelso, Enid, 1917-18.

COUNCILOR DISTRICTS.

1. Cimarron, Texas, Beaver, Harper, Ellis, Woods and Woodward; Councilor, Dr. J. M. Workman, Woodward. Term expires 1919.

2. Roger Mills, Beckham, Dewey, Custer, Washita and Woodward; Councilor, Dr. Ellis Lamb, Clinton.

3. Harmon, Greer, Jackson, Kiowa, Tillman, Comanche and Cotton; Councilor, Dr. G. P. Cherry, Mangum.

4. Major, Alfalfa, Grant, Garfield, Noble and Kay; Councilor, Dr. G. A. Boyle, Enid. Term expires 1919.

5. Kingfisher, Canadian, Oklahoma and Logan; Councilor, Dr. Fred Y. Cronk, Guthrie.

6. Caddo, Grady, McClain, Garvin, Stephens and Jefferson; Councilor, Dr. C. M. Maupin, Waurika. Term expires 1919.

7. Osage, Pawnee, Creek, Okfuskee, Okmulgee and Tulsa; Councilor, Dr. Walter E. Wright, Tulsa.

8. Payne, Lincoln, Cleveland, Pottawatomie and Seminole; Councilor, Dr. H. M. Williams, Wellston.

9. Pontotoc, Murray, Carter, Love, Marshall, Johnston and Coal; Councilor, Dr. J. T. Slover, Sulphur.

10. Washington, Nowata, Rogers, Craig, Ottawa, Mayes and Delaware; Councilor, Dr. R. L. Mitchell, Vinita.

11. Wagoner, Muskogee, McIntosh, Haskell, Cherokee and Adair; Councilor, Dr. P. P. Nesbitt, Muskogee.

12. Hughes, Pittsburg, Latimer, LeFlore and Sequoyah; Councilor, Dr. L. S. Willour, McAlester. Term expires 1919.

13. Atoka, Pushmataha, Bryan, Choctaw and McCurtain; Councilor, Dr. J. L. Austin, Durant.

CHAIRMEN OF SCIENTIFIC SECTIONS.

Surgery and Gynecology—Dr. McLain Rogers, Clinton.

Pediatrics and Obstetrics—Dr. L. W. Cotton, Enid.

Eye, Ear, Nose and Throat—Dr. A. W. Roth, Tulsa.

General Medicine, Nervous and Mental Diseases—Dr. A. K. West, Oklahoma City.

Genitourinary, Skin and Radiology—Dr. C. R. Day, Oklahoma City.

Legislative Committee—Dr. Millington Smith, Oklahoma City; Dr. J. M. Byrum, Shawnee; Dr. W. T. Salmon, Oklahoma City.

For the Study and Control of Cancer—Drs. LeRoy Long, Oklahoma City; Gayfree Ellison, Norman; D. A. Myers, Lawton.

For the Study and Control of Pellagra—Drs. J. Lewis Day, Norman, Chas. R. Hume, Anadarko; J. C. Watkins, Checotah.

For the Study of Venereal Diseases—Drs. Wm. J. Wallace, Oklahoma City; Ross Grosshart, Tulsa; J. E. Bercaw, Okmulgee.

Necrology—Drs. Martha Bledsoe, Chickasha; J. W. Pollard, Bartlesville.

Tuberculosis—Drs. L. J. Moorman, Oklahoma City; C. W. Heitzman, Muskogee; Leila E. Andrews, Oklahoma City.

Conservation of Vision—Drs. L. A. Newton, Guthrie; L. Haynes Buxton, Oklahoma City; G. E. Hartshorne, Shawnee.

Committee on First Aid—Drs. F. H. Clark, El Reno; Chas. Blickensderfer, Shawnee; Jas. C. Johnston, McAlester.

Committee on Medical Education—Drs. A. L. Blesh, A. K. West, A. W. White, Oklahoma City.

State Commissioner of Health—Dr. John W. Duke, Guthrie, Oklahoma.

STATE BOARD OF MEDICAL EXAMINERS.

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Reciprocity with Georgia, Kentucky, Mississippi, Nevada, North Carolina, Wisconsin, Kansas, Michigan, Nebraska, New Mexico, South Dakota, Tennessee, West Virginia.

Meetings held second Tuesday of January, April, July and October, Oklahoma City.

Address all communications to the Secretary, Dr. R. V. Smith, Daniel bldg., Tulsa.

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Alfalfa	H. B. Ames, Burlington	L. T. Lancaster, Cherokee
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Beaver		
Beckham	V. C. Tisdal, Elk City	J. E. Yarbrough, Erick
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INDICATIONS AND METHODS FOR CESAREAN SECTION*

E. E. RICE, M. D., Shawnee, Okla.

The indications for conservative cesarean section are absolute and relative.

The absolute indications exist when the parturient canal is narrowed so much that the child, even reduced by mutilating operations, cannot be delivered with safety to the mother. Contracted pelvis with a conjugata vera of 6 or 6 1-2 cm. or an immense child will give absolute indications. Exostosis, irremovable tumors, neoplasms, etc.

The relative indications, generally speaking, exist when the doctor decides that the abdominal delivery offers the greater safety to both mother and child.

Cesarean section is now performed so safely that it is freely done, where formerly it was not to be thought of. Of late years the employment of this operation is regarded a proper treatment for placenta praevia—particularly of central implantation, and in cases of eclampsia, under many circumstances.

The time for operation is all important, formerly it was done when all other means to deliver had failed, and consequently the mortality, from shock and infection, was very great. The educated accoucheur should know in advance if the patient is able to deliver herself or not and be prepared to do this operation at the proper time, but unfortunately educated accoucheurs do not have charge of a very great percentage of labor cases.

It is best to operate when the woman has had pains for an hour or more, although there are many who prefer operating before labor begins—there are advantages for both contentions. In the presence of infection the relative cesarean section is contraindicated, this includes gonorrhea. Vaginal examination by the patients themselves, or poorly educated midwives and doctors, are to be looked upon and treated as infected cases.

The Operation.—The preparations are mainly those for laparotomy in general, in addition provision is made for the child. If possible a preparatory treatment extending over several days is desirable; daily warm baths with brush scrubbing of the trunk from ensiform to the knees, a light laxative with enemata, plain nourishing food, plenty of rest in bed, and walks in the sunshine—all tending to render the patient more resistant. Urine is examined for nephritis, and vaginal discharge for gonorrheal infection. Shaving from ribs to knees well down the flanks, scrubbing with brush and tincture of green soap for five minutes, rinsing with plain water, scrubbing with coarse cloth and alcohol 95 per cent for three

*Read in Surgical Section, Oklahoma City May 10, 1916.

minutes, scrubbing with bichloride 1-1500 for three minutes, then cleansing with 95 per cent alcohol just before incision.

Four assistants are needed, one for ether, one to resuscitate the child, one to help on either side, and one to hand instruments, thread needles and supply sponges. Just before the anaesthetic is started, give a hypodermic of aseptic ergot and have patient catheterized.

The incision is made in the linea alba, and should be 5 1-2 inches long with the navel as its center and a little to the left, make a small opening with scapel and cut the balance with scissors on two fingers inserted into the peritoneal cavity. Bring uterus to the middle line and have it steadied by assistants. With another knife a longitudinal incision 5 inches long, is made half through the uterus, and with lessening strokes the uterus is opened. Then cutting between two fingers with scissors the incision is enlarged to the size of the first uterine cut. Grasp one foot and make the breech extraction. The assistant presses the side of the belly against the retracting uterus to keep liquor amnii and blood out of the peritoneal cavity; clamp the cord in two places; cut between, pass the child to assistant with tray covered with aseptic blanket. Deliver the uterus from abdominal cavity, and cavity closed temporarily with three bullet forceps and covered with rubber drain or sterile pad.

Deliver placenta and membranes, wipe interior of uterus with gauze pad to cleanse off shreds of placenta and membranes, and stuff clean pad into cavity, which rapidly closes as the organ contracts; this is aided by brisk kneading and firm compression.

The first row of suture takes in the muscles near the endometrium not puncturing the decidua, continuous and one-half inch apart—number two, twenty day catgut. This line of stitches lessens hemorrhage and wall of uterus is much thicker by this time. You make out fairly well the three coats; the second coat is sewn continuously with same gut as first layer and knots being well tied and not too much constriction as to cause necrosis. The third, or peritoneal layer, is made with a smooth needle, using number one catgut, and takes in the peritoneum and a little of the muscular tissue. It is also continuous and may be made subperitoneal—similar to a subcuticular stitch, carefully coaptation, stitching and tying is time well spent. Replace uterus into abdominal cavity, make peritoneal toilet, pull up small intestine out of pelvis, draw down omentum behind uterus and close abdominal wall in usual way. This method after DeLee is quite satisfactory for the classical operation.

The Poro-Cesarean Section.—Poro of Pavia, 1876, advocated the removal of the uterus after abdominal delivery of the child to avoid hemorrhage and infection, but since the dangers of both are so greatly lessened in recent years there are not so many indications for this radical measure. If myomata are present, large and block the pelvis, it may be necessary to remove the uterus, but in most cases myomectomy may be done—if the woman desires more children. In osteomalacia the uterus and ovaries should be removed—uncontrollable hemorrhage at the time of operation may necessitate the amputation of the fundus. In cases of ruptured uterus or one torn by previous efforts to delivery, and when infection is present, best remove the uterus, also in carcinoma.

The technic is about the same as for the classical operation:—incision is made lower down. After delivery of child, clamp the broad ligaments close to the uterus, leave both tubes and ovaries, unless diseased. Proceed as in any hysterectomy. Blood vessels are all enlarged and must be securely tied. Mortality in these cases is still high, probably 20 per cent.

Extraperitoneal Cesarean Section—Has been practiced for many years with the hope that it could be performed in septic and suspicious cases without peritonitis, but the infection has usually extended just the same, and this operation had never been popular in America.

Cesarean Section on Dying or Dead Women.—A foetus will live for five to twenty minutes after the death of its mother. In recent years the operation has often been successfully done. After the twenty-sixth week, immediately after life is extinct, the belly is opened. Not necessary to get consent of the husband or family, but for your own protection this should be done if possible. The Talmudists and the Catholic law demand that cesarean section be performed on the dying woman. Necessary to get consent of the husband or next of kin. If conditions are right for delivery from below, this is preferable.

Vaginal Cesarean Section.—Is an operation devised by Dührssen and is especially indicated in eclampsia, and according to its author has the following indications: 1. Danger to the life of the mother caused by abnormalities of the cervix uteri and of the lower segment (carcinoma, myoma, rigidity, stenosis, partial dilatation of the lower uterine section), abnormalities which make impossible the dilatation of the cervix by uterine contractions or render it very difficult. 2. Dangerous conditions of the mother endangering life, which are removed or moderated by evacuation of the uterus (diseases of the heart, of the lungs, and of the kidneys, premature detachment of the placenta). 3. Conditions which presumably may cause the mother's death. 4. Danger to the life of the child without the presence of danger to the mother at the same time.

Method.—Evacuation of the bowels and bladder, thorough cleansing of the vulva, vagina, etc. Enema of ergot. Perineovaginal incision on the right side, through the levator ani muscle; parts held open by large retractors to control hemorrhage. Cervix seized and drawn down by double tenaculum on each side and strong threads substituted. Posterior lip divided to vaginal vault, incision $\frac{1}{2}$ cm. long made in posterior fornix, peritoneum bluntly dissected, anterior lip and vaginal fornix are similarly dealt with. The anterior and posterior walls are further split with scissors, uterine cavity quickly entered with the hand grasping a foot, and the foetus rapidly delivered. If uterus contracts, wait a few minutes for placental detachment, otherwise detach manually and stuff cavity with gauze. Uterine incisions are closed with catgut, interrupted and tied outside, and then close the two vaginal wounds with continuous catgut, leaving small opening in vault for drainage; close perineovaginal incision with silk worm gut suture.

Discussion.

Dr. A. C. Hirshfield, Oklahoma City: Dr. Rice has opened up a very interesting and fruitful subject for discussion. I am, and have been especially interested in this subject since I was a house-surgeon in the New York Lying-In Hospital, where there are more cesareans done than in any other two or three similar institutions in America. Dr. A. B. Davis, the originator of the high operation, has done nearly three hundred cesareans, and the whole staff of the hospital have done nearly one thousand abdominal cesarean sections. Therefore, it is evident that I have had exceptional opportunities in the operation under discussion.

I think Dr. Rice has covered the whole field of cesarean section, viz., the classic cesarean operation, the extra-peritoneal cesarean, the Poro-cesarean, and the vaginal cesarean. Each of these operations is a worthy subject for a paper within itself, so, necessarily, we cannot cover all of the important points thereof. I may say, however, that in the majority of cases the medium operation is now being used. That is the one that Dr. Rice presented. The high operation of Davis is, I believe, rapidly coming into popularity. Dr. Davis has done this operation in over two hundred cases. In this operation the incision, 10 to 12 cm. long, is made entirely above the umbilicus. Dr. Rice had so much to cover that he could not discuss very thoroughly the indications for cesarean section, so I want to stop and spend some consideration on that subject. In my opinion, the indications for the cesarean section form the most important consideration of the operation. It is not a difficult operation, but it cannot be done successfully if the conditions are not right, and it takes judgment and experience to decide when it is proper to do a cesarean.

Those operators who have the best mortality rate learned not to do it in the cases that have been neglected or tampered with. In New York in the hospital we were troubled especially with cases that came to us after midwives had had them. Over one-half of the babies in New York are delivered by midwives and most of the mothers who die, die of sepsis. At the Lying-In Hospital in New York, the staff have learned by long experience that it is not wise to do a cesarean on a case which has been in the hands of a midwife, for this patient is more or less exhausted from a long, neglected labor and is very surely infected. To operate on such a case means probable death to the mother and possible loss of the child. This also applies to the cases which have been examined promiscuously by outside physicians whose technic we could not trust, and to cases where high forces and other vaginal attempts at delivery had been made. On the more favorable of these neglected cases, extra-peritoneal or a Poro-cesarean may be done, but to do the classic operation is only to invite disaster. All know there are a great many cases of eclampsia in which the cesarean section is done in order to save the life of the mother. Many of these cases, of course, die in spite of whatever is done—die just as quickly whether high forceps or a version is attempted, but in my opinion a rapid cesarean offers the best chance to a mother as well as the child.

Dr. Rice mentioned the absolute indication. Not many cases present absolute indication, that is, that the pelvis is so contracted that the baby cannot be delivered vaginally even by craniotomy. It is manifestly not safe to wait for the absolute indication before doing a cesarean, as the great majority of necessary cesareans come under the head of the so-called relative indication. In general, disproportions form the indication of the greater number of operations. Eighty-five per cent of cesareans at the Lying-In are done for disproportions; not always for contracted pelvis, but perhaps for a normal pelvis with an enormous child. I have seen two cases in which the pelvis was normal but the baby was so large that it could not be delivered per via naturales. In one case I discovered that the head of the child was hydrocephalic and, therefore, the child was not worth saving, so we did a craniotomy. The second had been neglected too long, a normal labor being expected because the measurements were normal, but we had failed to properly estimate the size of the child's head a version with craniotomy of the after-coming head was necessitated. With reference to other indications I wish to mention eclampsia, placenta-*prævia* and abruptio-placentae, especially in cases of primiparae and others where the cervix is not dilated and dilatation would be difficult and slow. In cases of that kind, if the patient has not been tampered with too much, it is much better that the abdominal delivery be done.

The doctor has said that the urine should be examined for nephritis. However, let us not limit the urinalysis to looking for nephritis, but rather make a thorough examination for any evidence of toxæmia or any other constitutional pathology. Remember that toxæmia of pregnancy is not always evidenced by nephritis. Any or all of the parenchymatous organs may be involved without kidney involvement. The blood pressure should, of course, be taken in all cases. For the blood pressure is just as important an index of a toxæmia of pregnancy as the urine, and an elevated blood pressure may be a danger sign when the urine is practically normal.

The essayist recommended the injection of an ampoule of aseptic ergot at the beginning of the anesthetic. Of this, I approve, but I further recommend that which I consider to be more useful, viz., the injection, in addition, of an ampoule of pituitrin at the beginning of the operation. This acts rapidly and surely providing a prompt contraction and hemostasis of the uterus immediately after the incision is made. The ergot, acting more slowly, continues the contraction of the uterus after the patient is in bed. This should be continued in smaller doses two or three times daily for several days, or until the fundus has disappeared beneath the lower end of the abdominal incision.

Dr. Winnie Sanger, Oklahoma City: When I was in Dallas last year I heard

of a specialist in obstetrics who handled all of his cases by doing the cesarean section regardless of the indications. It did not occur to me at all that it required a matter of skill. It seems to me that we should condemn him for his ability. I believe that Dr. Hirshfield has pointed out the right indications in his discussion. I think we should bear in mind that the indications should always point to cesarean section before performing the operation. Most of us prefer the operation at any time in preference to craniotomy. I want to call attention to the fact that the fetus lives from five to twenty minutes sometimes after the death of the mother; I guess some of you read the article where the fetus lived an hour after the death of the mother.

Dr. Livermore, Chickasha: The discussion covers many points, but there is only one I want to bring out. In using cesarean section, it is used principally for the protection of the child; not altogether, but that is the main thing—the safety of the child. I think at all times we should let the mother go until labor sets in. We have seen so many cases where cesarean section has been done for the sake of the living child. They have taken their calculations at the time the child should be born and thereby have gotten a premature child and I think if we wait until labor sets in we would be sure of the indications.

Dr. Fred Clark, El Reno: There is just one point in connection with the doctor's paper and that perhaps we ought to speak of. I am like Dr. Rice, I have not seen enough of these cases to discuss the subject from my own personal experience.

In opening the discussion, Dr. Hirshfield mentioned the fact that in the Lying-In Hospital in New York they had refused to do the cesarean section where forceps had been used or attempted and I think that we will go just a little too far there. A case I have in mind at this time is a case where the mother had had a hip disease for a long time, of long standing. I had no idea there was pus present at that time. The second morning we were doing a cesarean section on her and during the cesarean section we discovered about a quart of pus. I turned to the nurse and said, "It will be goodbye to her in about forty-eight hours," but the patient is living and well at this time. That does away with the idea that we cannot do anything in those cases. We must not make any fixed rules.

Dr. F. M. Sanger, Oklahoma City: I have enjoyed Dr. Rice's paper and Dr. Hirshfield's discussion and the others. This operation as has been said is not a very difficult operation. We know that the old mammys of the South have often done this out in the shed with the butcher knife and they did not take much pains with the patient. I think that we should make as thorough preparation as we can, but I do not know that it is necessary to shave the hair off as carefully as some have advocated. I think all that is necessary is to shave as we would in any other abdominal operation—sterilize and apply alcohol. There is another thought that occurs to my mind, and that is with reference to certain cases that I refused. Now, some may refuse to do those operations that are just as necessary as those that are done—when they have been tampered with, I mean. What is going to become with these cases that we refuse and not do if it is necessary to do them? If they get along well, all right; if they don't, it might look like we were doing too many of these operations any way.

Dr. V. C. Tisdal, Elk City: I want to report a case that came to our hands Saturday morning, in which the patient was very interesting to me. It was a case of very severe hemorrhage and indications of an abdominal cesarean section and we did the work. The mother had lost a great deal of blood and in addition to doing the work we did a direct blood transfusion from her son. The case this morning was doing very nicely. We took about 500 cc.'s of the blood from the son while we were doing the work and saved the mother and child. This was done in a home. I don't know whether we will get infection or not, we haven't so far, and it was done in a hovel you might say, and the blood transfusion we

think possibly did more to save the mother than the cesarean section did, but the child was saved by cesarean section.

Dr. Rice, closing: Mr. Chairman, I think I have nothing else to say. I am much obliged to Dr. Hirshfield and the rest of the doctors who discussed the paper.

EXTRA-UTERINE PREGNANCY.*

By McLAIN ROGERS, M. D., F. A. C. S., Clinton.

There is but little new on the subject of extra-uterine pregnancy, particularly the etiological factors, consequently I shall emphasize the methods of dealing with this condition when encountered.

In former years our views concerning the origin of ectopic gestation depended mainly on the discovery of pathological conditions microscopically evident—such as diverticulum, accessory tubes, twisting or failure in development of tube, pressure of tumors and the various inflammations as visible etiological elements. It is now an accepted fact that ectopic gestation occurs much more often in multiparas (ratio of 10 multiparas to 1 prim.) and that this condition most always follows a sterile period of one to several years, and rarely less than two years, and that this sterile period represents the time in which inflammatory changes occur in mucosa following infection, whether gonorrheal, puerperal, or tubercular. These changes naturally involve the uterine end of tube more often than abdominal, and in the subsequent course of events, the uterine end heals more slowly.

One of the greatest factors in establishing infection as mainly responsible for this condition was the finding of the opposite tube infected in such high per cent cases. Atrophic changes may be a cause, but I have yet to see a case reported where this cause obtained. Extra-uterine pregnancy is met with, per capita, more often in the large cities than country or small towns, which is probably due to prevalence of sexual vices in cities, but it is by no means rare in rural communities.

While tubal pregnancy is generally unilateral, Gebhart reports nine cases of gestation of both tubes at the same time. Various authors have collected 119 cases of combined uterine and extra-uterine pregnancy, which is proof of affection of one tube and excludes external migration. Ovarian pregnancy is very rare; authentic cases reported by various authors vary from 20 to 40. Abdominal pregnancy is a rare condition and is generally secondary to rupture of tube. Graefe recently reported a case of primary pregnancy in the omentum.

Bandler classifies tubal gestation in three forms: Columnar type, in which the ovum is surrounded by folds and capillaries of mucosa only and makes abortion in this form easy and less dangerous. 2nd. Intercolumnar type, where ovum rests on wall of tube, causing more hemorrhage. 3rd. Centrifugal, where ovum sinks into wall of tube invading vessels and even to serosa, consequently the more dangerous type. In the centrifugal type, the ovum burrows into wall of tube and the villi erode their way into blood vessels, and things here being so different to the thick decidua of uterus the dangers of this type become very plausible.

Pathological findings have established that rupture of tube, in the first three months, does not occur as a rule as a result of the ovum being too large, but from hemorrhage primarily minute.

There would be no purpose in rehearsing symptoms upon which good authorities differ but little, as the most important factor is an accurate history, with symptoms in order and time of occurrence. We should be able, at least, to put a reasonably good construction upon pelvic examination and at all times keep our minds

*Read in Surgical Section, Oklahoma City, May 10, 1916.

alert to the necessity of excluding this trouble when dealing with pelvic disease in the female. Suffice it to say of symptoms, that one period missed, concomitant symptoms of early pregnancy, pain in lower abdomen and generally on one side, mild peritonitic symptoms, after short time irregular bloody vaginal discharge after coitus, strain, examination or other disturbance—a sudden severe pain with feeling of faint or dizzy, and finally symptoms of shock due to distention, blood in peritoneum, hemorrhage, or of all.

After making the diagnosis of ectopic pregnancy, we approach the important phase to the welfare of both patient and profession. The more important because many women die from inopportune interference and for the reason that we now know many tubal pregnancies rupture with light pain, hemorrhage and slight fainting spells and, undiagnosed, recover and stay well. While extra-uterine pregnancy is necessarily surgical, the time to interfere is the all important factor. I believe any case properly diagnosed immediately operable, if hemorrhage is not severe and general condition good. I do not believe we are justified in the hazardous procedure of operating when the blood count and clinical picture show the condition to be extreme. I believe most cases in this extreme condition kept quiet and treated expectantly will recover and can be tided to a safe point for operation, while statistics of operation at such crisis make a poor appetite for the surgeon. I have personally observed four cases with hemorrhage to superlative degree. One left by her doctors and thought to be dead (no blood count), and the three others red blood count one million or below, all expectantly treated, recovered and safely operated later.

Out of a total of sixteen cases operated at the Clinton Hospital, we had no death. Of this series, fifteen were tubal and one combined ovarian and uterine.

Of the sixteen cases, eleven were positively diagnosed, three were diagnosed as probable extra-uterine pregnancy, and two undiagnosed. Of the eleven positively diagnosed, nine were diagnosed by the family physician or before entering the hospital and two after consultation at the hospital.

Of the three diagnosed as probable extra-uterine, one was complicated with acute appendicitis, one where hemorrhage from ruptured tube was forced into ovarian cyst size of pint cup and thence back into tube at a point more proximal to uterus, and in the third case there was no good reason for not making more positive diagnosis.

Of the two undiagnosed, one had a haematoma which entirely filled the pelvis and lower abdomen and had existed for five and one-half weeks. This haematoma was so firmly attached to surrounding viscera that separation was very difficult and in freeing from the uterus, the uterus was lacerated into cavity for more than two inches. The second case undiagnosed was ovarian pregnancy of five months standing, with combined uterine pregnancy, in which the uterus was emptied of two and one-half months fetus, two and one-half months before operating this case. This was a case of Dr. Zeigler of Shamrock, Texas, and while he noticed abdominal tumor when emptying uterus two and one-half months previous, he did not suspect extra-uterine pregnancy, nor did we when she entered the hospital. Both tube and fimbria was free from ovarian cavity and there could be no doubt as to it being ovarian primarily.

In view of my personal experience and the recent observations of other writers upon this subject I am convinced, that by more careful observation and application of this knowledge, we should be able to lower the mortality rate in this condition.

Discussion.

Dr. W. E. Dicken, Oklahoma City: Mr. Chairman, I feel a little bit timid in opening this discussion because I did not expect to be called upon, but it is certainly a subject that should be discussed because it is of such vast importance. I think the principal reason why we should pay especial attention to ectopic gestation

from a surgical standpoint, is the importance of an early diagnosis. If certain points are overlooked which were brought out in Dr. Rogers' paper so graphically, as the menstrual disturbances and the peculiar pain in the side and symptoms of hemorrhage, it might be too late to do the patient very much good when the diagnosis is made. I recall a case that was sent to me a short time ago, with symptoms of severe abdominal hemorrhage and a large abdomen, and upon a vaginal examination, we ascertained nothing except a wall around the pelvis, with no definite history of frequent menstruation. The patient was in such a weakened condition that we thought we would give her salines and wait a little while to see if her blood pressure would not raise and hemorrhage cease so we could go into the abdomen with perfect safety. For three days the patient seemed to hold her own, but her hemoglobin went from 40 to 35 with no improvement in her general condition. Upon opening the abdomen, we found a large haematoma filling the whole cavity of the pelvis, especially the left side and still oozing, with her abdomen full of blood.

The patient made a good recovery but look how much blood was lost by waiting. This calls your attention to an early diagnosis and an early operation. If you get them early and operate and the tubes are found to be diseased as the essayist has mentioned, it might be possible by resecting the tube if there is enough healthy tube left and give nature an opportunity to build up a new tube. This I have done, but am unable to speak for the permanent results.

Dr. Blesh, Oklahoma City: Dr. Rogers' paper deals with too important a subject to be passed without discussion. I will dwell upon only a few points touched by the essayist. First, the rarity of true ovarian pregnancy, that is, a pregnancy not secondarily involving the ovary as many do, but primarily seated in or on the ovary. In over 100 cases of ectopic gestation, I have had but one case of true ovarian pregnancy.

Second, the comparative rarity with which an ectopic gestation goes on to maturity in the abdomen surviving the many vicissitudes of its anomalous situation. In my experience I have seen two such, one being delivered at term of a living child by abdominal section, the other forming a colossal abdominal abscess in which lay at term, the macerating and decomposed fetus. This abscess communicated with the rectum. It was treated by abdominal incision, removal of fetus and drainage. In both cases the mother recovered and in one the child lived several years.

Third, the edeacious properties of the Langhan cell layer, when the placenta is implanted in foreign soil such as is furnished by the free abdominal cavity, sometimes gives rise to serious complications in the way of erosions. It will be remembered that it is this very edeacious property which, plus metastasis, makes of chorion epithelioma or syncytioma maligna, such a formidable thing. No man has yet been able to inform us why this cell is not always malignant, what it is that commands it thus far, and no farther shalt thou go. It certainly corresponds with the definition of a malignant cell in all but the property of metastasis.

Illustrative of above, I once operated a case of ectopic gestation in which the implantation was upon the sigmoid deep in the pelvis. With the removal of the preducts of conception I found an enormous, gaping hole in the sigmoid. The repair of this by any of the ordinary methods was simply out of the question. Incident to the pregnancy, the tissue was like wet blotting paper and would hold no stitch. The problem was finally solved by passing a rubber rectal tube through the anus, on into the proximal side of gut, to which it was stitched with a few anchoring sutures of cat-gut. The tube was now withdrawn from the anus and of course in its withdrawal it brought with it and invaginated the proximal in to the distal gut. The proximal invagination was brought to the anal margin, and stitched there with the tube in situ. The line of invagination was reinforced. After a week the invaginated portion sloughed and with the tube came away. Patient made an uncomplicated recovery.

Fourth, when shall we operate? Contrary to many authorities, I operate at once and for the same reason that under similar circumstances I would ligate a bleeding vessel. Just as soon as I am ready to begin, I have normal salt hypodermoclysis and begin to do speedily what I have to do. *Time* is of far more importance here than that too much of it be wasted in striving for the refinements of the peritoneal toilet. Of course this refers to the exsanguinated cases. My death loss has been one, and she died from starvation two weeks after operation and had starved for a month before, a case of pernicious vomiting of pregnancy associated with an ectopic gestation, certainly a rare condition.

Dr. Fred Clark, El Reno: There are one or two points in the paper that I think we should consider more carefully than we have. The question of the time to operate is the all-important thing, as I see it. The doctor discussing the paper just preceding me spoke of only one death in his experience and I can reverse it and give but one due to immediate operation assisted by another physician more competent than myself, and it was done in one hour and a half. There does not seem to be any general rule to follow. It is a question that calls for the best judgment of the physician.

There is another point we should keep in mind. Many of these cases occur on the right side in the tube and are confused with cases of appendicitis. I can recall several that came under my observation that had at sometime been diagnosed as appendicitis. It is due to a careless diagnosis. I have made the diagnosis, and I am just as willing to say it myself. I don't think a rupture takes place but what an examination will certainly make a clear division between a case of appendicitis and a case of ruptured tubal pregnancy. Those are two things everyone needs to keep in mind; first, the necessity of choosing the right time for operation, and second, do not confuse this with a case of appendicitis, if it happens to be on the right side.

Dr. F. A. Hudson, Enid: I diagnosed one as abortion. I curetted her under ether and found that she had a case of tubal pregnancy in the left tube. I changed my diagnosis to an ectopic gestation and finally operated two or three days later, entering through the uterus.

I think there is one thing that has not been mentioned and that is the late cases that come to us five or six weeks after rupture of the tubes. These cases seem to have a good deal of infection. In opening these cases through the pelvic sac, I have often found blood mixed with pus, and I think that such a case would be very dangerous to operate and attempt to remove from the abdomen.

Dr. Rogers, closing: In presenting this paper I had two things in mind. 1st, early diagnosis. The most important thing Dr. Blesh spoke of, the time for operation. I stand exactly opposite in that respect, but I feel that the consensus of opinion is getting to a point where the majority of men are feeling as I did. I think the patients should have rest in bed for from five to six days in order to build up the red blood count to be tween three and four million. When they are exhausted and in an extreme weak condition, it does not take much to put them over the fence. From what I know, I think if it was my wife and the condition was extreme, I would take the chance that way.

PREVENTION OF ABORTION

Congress has voted an appropriation of \$50,000 for the investigation and control of abortion—but it is a disease of cattle and not of man that is to be investigated and controlled and the undertaking is under the direction of the Bureau of Animal Industry. Why not appropriate \$50,000 for the investigation and control of abortion among human beings, and let the Public Health Service do the work? There is certainly every year a sufficient number of undesired and unplanned abortions, and a sufficient number of desired and planned abortions which would never be consummated, were the possible consequences known, to justify such an effort.—*Journal of the American Medical Association.*

INDICATIONS AND USE OF FORCEPS IN OBSTETRICS*

By J. M. BONHAM, M. D., Hobart, Okla.

The indications for the use of forceps are maternal or fetal dystocia, or the presence of symptoms which would endanger the life of the mother or child if labor were allowed to pursue its course.

The practice which is pursued by some operators of using forceps as soon as the head reaches the perineum is probably too radical, but the opposite practice of waiting for hours until the mother is exhausted and the child asphyxiated, when it has been apparent to the physician and, perhaps, even to the relatives and friends, that operative force would have to be resorted to, is too slow to be tolerated in modern obstetrics.

It should ever be our aim to anticipate the dangers rather than to meet them after they are already at hand. Instead of having to work like trojans to save a mother and babe already near death's door, we should prevent the threatened danger by a prompt and proper execution of the obstetric art. In general it is proper that we should operate before the woman is exhausted and before the infant's heart beats become progressively weakened. Frequent examinations of the fetal heart should be made to determine the character of heart beat and if, between the pains, the pulsations are growing progressively more rapid or becoming weaker, then the time for intervention is at hand. This will, of course, not occur for many, many hours in a normal labor with a normal child, but if the pains are almost continuous, whether severe or not, there is danger of asphyxiation of the child from compression, and these are the cases which should be especially watched.

DeLee says: "In America 75 per cent of forceps operations are done because of insufficiency of the powers of labor when the head has come onto the perineum, or is visible during a pain. Either the head is a little too large or the perineum a little too resistant, or the woman's nerves have given out". With the larger use of pituitrin it is probable this percentage has been materially reduced.

Occipito-posterior positions arrested in rotation or, the *deep transverse arrest*, usually call for forceps, as does arrest at any point in the pelvis provided the child may apparently be delivered alive. If the child is dead it is better, ordinarily, to resort to mutilation.

Other conditions calling for forceps are the arrest of the after-coming head in breech or foot presentations, eclampsia, infection during or preceding labor and the acute infectious diseases, as well as heart disease with loss of compensation, tuberculosis of an advanced type, hernia, appendicitis and other conditions within the abdomen where the increased intra-abdominal pressure resulting from the pains would be likely to aggravate the condition or even result in strangulation or perforation. Placenta previa, abruptio placenta and prolapse of the cord may call for forceps, also.

The nature of the danger to which the mother or child are subjected in labor, and which call for the use of forceps, must be such as can be eliminated by the use of forceps, or, at least we should be reasonably certain of our ability to remove this danger, otherwise some other form of intervention should be undertaken.

Forceps are contra-indicated in deformed pelvis, except in the moderate degrees of generally contracted pelvis, when, if the degree of contraction is such as to make it appear that the child may be safely delivered, then forceps should be applied, but the operator must ever remember that he occupies the position of earthly saviour to that mother and child and that they are entitled to the most enlightened treatment. We should approach these cases with a full knowledge of our responsibilities, and if we do so, we will the better prepare and equip ourselves for the emergencies.

*Read in Surgical Section, Oklahoma City, May 10, 1916

Forceps should not be used until the cervix is effaced and dilated by nature or by the operator, as great danger to the mother may result from efforts at dilatation with the forceps. The membranes should be ruptured before the application of forceps because of the possibility of forcibly detaching the placenta or causing *prolapsed uteri*.

The arbitrary rule of waiting two or three hours after full dilatation of the cervix and engagement of the head, with no progress in labor, before applying the forceps, is good so far as arbitrary rules may apply, but the mother and child are deserving of at least as much consideration as we give our automobiles. We should be sure of a sufficient quantity of fuel in the gasoline tank as expressed by the strength of the mother; we should be sure of our road conditions as expressed by the diameters of the pelvis, and that of the car as expressed by the presenting part of the child, and we should watch the working of the engine and the effect of the pull on the car and be ready to intervene for the safety of either.

Forceps may be used for a variety of purposes, but they are essentially an instrument of traction. Used as a pump or as an augur they are extremely dangerous to the mother and unsafe for the child. If used at all as a means of rotating the head, they should be gently used in a slow, half circular movement, the handles being carried in the direction opposite to which nature is trying to rotate the head of the child, as this movement turns the blades in the direction of normal rotation.

We have been taught the high, the low, the medium, or the high-medium and low-medium or, the inlet, the outlet and the midplane operations. What is of vast importance in any forceps operation regardless of its name is a knowledge of the anatomy of the pelvis and its diameters and a familiarity with the surface markings of the presenting parts of the infant and a little more than a speaking acquaintance with the forceps and its use as an instrument of mercy.

Having decided on a forceps operation, we should deliberately sterilize, not only the forceps, but all necessary instruments and dressings which might be needed in controlling hemorrhage, repairing perineum or possibly the cervix, as well as to prepare for intravenous or other infusion of sodium chloride solution. If a pan large enough to allow sterilization of both blades and handles of forceps is not at hand, these should be passed through a gas or alcohol flame several times. An alcohol burner may be improvised in a few minutes by saturating a piece of absorbent cotton with alcohol and igniting it on a plate. After the usual sterilization of hands and the vulva, the operator should place a watch or clock in a convenient position where he can see the time and thus avoid hurrying through the operation, as the safety of the mother and child depend largely upon the slow and deliberate action of the accoucher. Nature should be simulated as far as may be and, at the end of each effort at extraction, which should be in the direction naturally assumed by the child and occupy about a minute, the forceps should be released without completely unlocking, thus relieving the pressure on the presenting part and at the same time giving the head an opportunity to rotate if complete rotation has not already taken place.

When the head has passed under the pubic arch, the forceps may be removed and the patient allowed to complete the labor. However, I believe by using an abundance of time and carefully watching and guarding the perineum, delivery may be accomplished with no increase in the percentage of lacerations, if not an absolute reduction therein.

Discussion.

Dr. W. W. Wells, Oklahoma City: I have enjoyed the paper. I believe that high forceps is a thing of the past. I do not think that you should use forceps on an unengaged head. I think we are all agreed on that. Medium forceps and low forceps are alright, but if you have a head that won't engage there must be some other trouble; either you have a contracted pelvis or some mouth presentation.

The Doctor mentioned prolapse of cord. I think if we have a prolapse of

cord and pulsation has ceased, it is well to try forceps. However, before we try forceps we should try to replace the cord and proceed with the delivery.

I believe the low forceps and the medium forceps are alright. I think the way they are used, however, have all to do with it. A great many physicians have been used to setting up the forceps and putting their foot against the side of the bed and pulling. My idea is to bring the head down just about the same amount of contraction as expected in a good hard pain and hold it there for some little time, release it and loosen the forceps and give the child a chance to resuscitate in the pelvis or wherever it may be and carefully bring it down as in a normal delivery.

TWELVE HUNDRED AND THIRTY-SIX CONSECUTIVE OPERATED CASES OF APPENDICITIS*

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The great temptation to the surgeon is to generalize upon the basis of too few cases. A hundred of any class of cases successfully dealt with may mean a lucky denouement merely. As the number is doubled, the chance of error is lessened by one-half. "Watchful Waiting" in coming to positive conclusions is to be recommended always. But this policy must never be permitted to paralyze decision in the individual case. His own conclusions are always to be checked against those of experienced surgeons everywhere.

Most of the cases used in this paper have been operated by myself, all of them have been operated in my clinic, hence I have been in close personal touch with all and each one has had personal study. The conclusions drawn are not offered as in any way final. This is not an age for the rule of the ipse dixit of any one. Strong representations based upon series of cases which a few years ago seemed large enough to settle any question have done great harm. The recognition of the essential is the real mark of the true surgeon. Reduction of a complex problem to its simple fundamentals is the first consideration. Hobby riding is dangerous. I am sure that reliance on the blood count as an indication of when to operate has often in the past led me astray. Nor would I discount the value of the blood count. But I think we are now recognizing the fact that the value of it is purely relative. A leucocytosis indicates to us now that in obscure cases we are dealing with an inflammatory lesion and in that far assists us on the way to a diagnosis.

Time of Election for Operation.

The time when to operate upon a case of appendicitis has been the source of much heated discussion. But upon certain fundamentals we are now in fair accord. We all agree that operation should be done if possible during the "first hours" of an attack. This period, however, unfortunately has been fixed in the minds of surgeons as an arbitrary number of hours. With some 24, with others 48, etc. Since the classic paper of Fitz taught us exactly what the trouble is, and Murphy devised a treatment aimed at its deliberate eradication, no competent or experienced surgeon questions that operation is the only adequate method of treatment.

The "first hours" of the attack, if the term is to mean anything surgically at all, must mean before the rupture of the appendix and the extension of the inflammatory process either as a localized abscess or as a diffuse peritonitis. This may give rise to the initial symptom of which the patient complains, may occur in a few hours, may be several days in coming or may not occur in the first attack or at all.

As stated above, the blood count as an indication for the time of operation

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has often misled me. Now a leucocytosis when attributable to the appendix, means for me immediate advice for operation.

Pregnancy has meant in this series of cases an increased virulency in the disease and has been a decidedly untoward factor. This has been so impressed upon my mind that I am far more insistent upon *immediate* operation in all cases of appendicitis occurring in the pregnant woman.

The association of appendicitis, more especially the chronic form, with gall bladder infection has been as 1 is to 5, that is to say 20 per cent.

In fully 35 per cent of the cases of chronic appendicitis there has existed for some time before a well marked history of mouth and throat disease, i. e. pyorrhoea alveolaris and septic tonsils. This is so frequent as to suggest a causal relation. I have seen cases giving the clinical symptom complex of beginning chronic appendicitis disappear following the cleaning up of the oral cavity.

It is somewhat amusing to me to hear the surgeons of large practice in the surgical centers speak of the assumed fact that the lay mind is now educated to and demand early operation in appendicitis, i. e., before suppuration. What they *should say is that the patient with pus in his belly cannot travel 1,000 miles to consult a surgeon.* Of necessity he stops nearer home. Of necessity, too, it happens that no matter how good a surgeon the local man is, he cannot hope to equal the "geographical" statistics of his more favorably situated colleague. The local cases coming to the central surgeon in proportion to those coming long distances are relatively few, thus to him it appears that the lay mind is educated in this matter simply because his operative work shows a relatively decreasing number of suppurative cases. My work, I regret to say, in spite of strenuous efforts at education, shows relatively as many pus cases as it did fifteen years ago. It is a calamity that this is true, for I consider pus in the abdomen, whether circumscribed or diffuse, as a carastrophe both as to increased immediate mortality and ultimate dangers.

So deeply do I feel about this matter that I often make the statement that "It is purely accidental if an abdomen that has had pus in it is ever again as good an abdomen as it were before." Of course adhesions per se do not cause trouble, no matter how convenient they have been as a "goat" for post operative pain, but when they do cause trouble, they do so by interfering with the drainage of some hollow viscus, intestinal obstructions, gall bladder entanglements, cystic and common duct, and pyloric stenoses, etc.

In order to get a proper perspective on our work in appendicitis, the force of certain facts must be appreciated. 1st. That 80 per cent of all cases of appendicitis will recover fully and permanently under no treatment at all, or what is its equivalent, so called medical treatment. 2nd. That 20 per cent will die so treated or under no treatment, either in the first or subsequent attacks.

This is the great stumbling block in the way of the education of the laity to the pressing necessity of immediate and early operation of all cases of appendicitis. Every individual knows of some case or cases who have apparently fully recovered who had the disease years ago. It is best met by utter frankness on the part of the surgeon. It is to be met with the absolutely true statement that the mortality of appendicitis unoperated is 20 per cent. That the mortality in clean cases in competent hands operated is 2-5 of 1 per cent. That the mortality of abscess cases is 6 per cent. That in the very worst class of cases, that of diffuse peritonitis, the death rate is just 20 per cent, or just the equivalent of the rate of all cases unoperated. That the average mortality in all cases operated upon, clean, circumscribed abscess, and diffuse peritonitis, is 3 1-2 per cent. That the physician cannot tell into which class the concrete case in hand is going to fall. That a mortality rate of 20 per cent is not to be compared with one of 2-5 of 1 per cent, or even one of 3 1-2 per cent.

In advising a very early operation one cannot doubt but that rarely a perfectly healthy appendix will be removed, but even so, the advantage is all for the early operation, for the reason that in competent hands the patient's life is not risked appreciably and he is positively insured against a very definite risk.

Pre-Operative Treatment.

The depleting and exhausting treatment of a few decades ago has been completely abandoned in favor of absolutely no preoperative preparation in the acute cases, except that which is done on the operating table. This merely consists in a shave (dry) of the parts, application of 5 per cent tincture iodine, which is removed with alcohol a few minutes later. A routine dose of morphine gr. 1-4, and atropine gr. 1-150, hypodermically, 1-2 to 3-4 of an hour before operating, is used. In my opinion an active physis is a dangerous thing in an acute attack of appendicitis. The chronic cases (interval) are given an ounce or two of castor oil the evening before and an enema the morning of the operation. A light supper and no breakfast.

The Operation Itself.

In acute non-suppurative cases in the male, where no doubt in the diagnosis exists, the McBurney incision is the operation of choice. If there exists reasons for a general exploration of the abdomen, a long right semilunar incision is made. Also if one has reason to believe the appendix is retrocecal, this incision is given the preference. In the female the lower mid-line incision is given the preference.

In circumscribed abscess always a small muscle splitting incision, as far out in the flank as possible, is selected. The removal of the appendix here is a secondary consideration. It should be removed if accessible and if it can be done without destroying protecting bulwarks of adhesions or opening up extensive areas for absorption. In at least 60 per cent of cases this is possible. It grows more and more justifiable as one's experience increases.

In interval operations in chronic cases, the incision should always be made large enough for general exploration, since it is in just these cases that we often find coincident gall bladder and stomach complications.

Diffuse peritonitis furnished us for many years the most difficult surgical problem. The mortality, no matter what we did, stood at the appalling figure of 90 per cent. This, thanks to the contributions of Murphy, Fowler, and no less through ancient history, that of Alonzo Clark, has slowly veered to almost the opposite—that is, to 80 per cent recoveries. But still one must consider it as a fact that no matter how small the area involved, potentially and actually diffuse peritonitis is far more dangerous than a circumscribed abscess of the peritoneal cavity, no matter how large.

In practically all of these cases coming referred to the surgeon, the degree of toxemia is high and therefore the threshold of resistance is very narrow. The problem now is one of relieving pus tension in the quickest possible time with the minimum of operative manipulation. Every surgeon should by every possible means impress it upon the physician's mind that every case of acute appendicitis should be given the benefit of the Fowler position throughout the treatment. Active catharsis should be scrupulously avoided. This holds above all in the transportation of diffuse peritonitis cases to the surgeon. It has been my lot, no doubt other surgeons will bear me out in the statement, to have seen the scales turned against the patient by the churning motion of transportation in the horizontal decubitus. The pus has been disseminated into the thirsty upper zones of the peritoneal cavity.

Briefly we treat these cases, no matter what the state of the disease or its extent, provided the patient is not dying, by:

1. Maintaining the patient in the Fowler position, even while operating.
2. Make one or more stab wounds under gas or local, consuming not more than 5 minutes, for drainage. In the cases that are in good condition the appendix is removed, if accessible. But the patients can neither withstand a prolonged operation, nor much traumatism.
3. Tap water by the Murphy drip, just as much but no more than the patient can take without distress when a gas escape in working order is provided.
4. Where advanced intestinal paresis has caused a regurgitation of intestinal contents into the stomach, lavage. *Nothing at all by the mouth.*

5. Morphine by the Clark rule without fear or favor.

6. No haste in opening the bowels. In a few days (3 to 7) the patient will develop a diarrhoea of his own which indeed may require a little simple treatment. When the bowels begin to move the rule is that the belly will flatten out, whereupon cautious feeding may be begun, and the patient may be permitted to lie down. If plenty of water has been administered, hunger or nutritive loss will not be great.

Post-Operative Treatment in General.

This is also simplified into a rule of "let the patient be undisturbed—alone as much as possible." Kindly sympathetic friends can suggest more misery, more things to do that ought not to be done, more "miserics" that do not exist, than the utmost refinements of our art can hope to deal with. Create a hope atmosphere. Suggest to the dolorous nurse that her true sphere in life is a job with the undertaker, not with the doctor.

Hot water only by the mouth and only if the patient is not nauseated or vomiting, then by the rectum. Bowels moved on the third day usually with castor oil and enemata. Out of bed in a chair as soon as bowel function is established in all clean, uncomplicated cases.

Shock.

This is no longer the bete noir of the abdominal surgeon who has cultivated a speedy, accurate technique. In any but the most complicated cases we no longer see a case of shock. Surgeons must realize that the human abdomen will not endure "fumbling" without shock protestation. If a ball player fumbles he is at once discharged. How unfortunate it is that there is no manager to discharge the fumbling surgeon. *Time*, while not the only shock factor, is indeed a most important one. As a rule time stands in inverse ratio to technique. Good technical surgery may be diagrammed as a gentle touch in the right place at the right time.

I am not in sympathy with the anoci-association idea of Crile. I do not believe in it, but I do believe in Crile. I think the enthusiastic genius of this wonderful man leads him to mistake the results of his masterful cleverness for the product anoci-association idea. Shock is better prevented than treated.

Anesthesia.

Ether by the open method in a trained anesthetist's hands continues to be the anesthetic of choice, although many uncomplicated cases are appendectomized under gas-oxygen, and fewer under local. My experience agrees with Bevan's, that everything considered, ether still maintains its position as the safest and most dependable general anesthetic.

Post-Operative Complications.

These have mostly to do with suppurative cases and consist in post-operative pneumonias, three in number. One occurred in a clean, uncomplicated case of appendicitis, was grippal in character, came on a week after operation and cost a promising young life. One was metastatic in a septic case, and one was possibly due to the ether.

Fecal fistulae occurred in 10 per cent. of the septic cases, but in only two instances required re-operation for cure. The rule is spontaneous recovery if left alone.

Adhesions as mentioned above proved harmful or painful only when they interfered with the drainage of some hollow viscus or bound down into painful position some sensitive organ such as an ovary, usually the former. It follows then that the patient returned complaining of some type of obstructive pain which was variously described as a digestive disturbance, a jaundice with or without biliary colic, a constipation ranging upward to a cataclysmal acute intestinal obstruction or a high nervous erethism due to ovarian compression.

Acute dilatation of the stomach to any dangerous extent did not occur in any of this series. The stomach tube has been our reliance. There is a standing order with the head nurse at Wesley Hospital that "when in doubt use the tube."

1. See mortality.

Post-operative nausea and vomiting has been really troublesome in but few cases, although present in greater or lesser degree in 75 per cent. We have fallen for all the panaceas to be found in the literature without appreciably lessening this unpleasant feature. The rule is that the severity of this complication has been directly proportionate to the length of the operation, and the extent of the traumatic insult, hence to the amount of anesthetic consumed plus the reduction of the resisting powers of the patient by traumatism, especially traction and visceral exposure. The tube here is the best remedy. *The kidneys* have given us two surprises, one of which is responsible for the death of one of our clean cases, a valuable citizen. As a matter of routine, a full laboratory examination of the urine is made one or more times if necessary before operation in all but the operatively urgent cases, but in the case mentioned above a very difficult retrocecal appendix, notwithstanding the analysis was negative, there was complete post-operative anuria with death.

In the other case confusion of reports on a busy day slipped a nephritic through to operation—a multiple operation including the appendix—but fortunately we got through after a stormy convalescence.

We have deliberately operated a number of nephritics, selecting gas-oxygen with a minimum of ether anesthesia, often with a most happy result on the nephritis.

Epitomized Case Report.

Total number of cases since 1908.....	1236
Deaths	43
Per cent	3 1-2
Clean cases comprising interval and early cases before suppuration, or with pus confined to the appendix, cases.....	701
Deaths	3
Per cent.....	2-5 of 1 per cent
Circumscribed abscess	184
Deaths	10
Per cent. (approximately)	6
Diffuse peritonitis	49
Deaths	10
Per cent.....	20
Appendix not removed at primary operation, abscess and peritonitis cases.....	55
Per cent.....	2 1-2 per cent..
Appendicitis either secondary to or complicated by other troubles, tubes, gall bladder, etc.....	302
Deaths	20
Per cent.....	6 plus

Multiple operations including the appendix with other operations, usually females requiring pelvic and repair work, and if males usually the gall bladder and sometimes the stomach, all clean cases, included with the 701 cases.....560

Discussion.*

Dr. Sanger, Oklahoma City: I certainly enjoyed the doctor's paper. I have found out every time I have seen an operation for appendicitis I have learned something I did not know before, but there are different ways people have of doing. With reference to the time in bed, some physicians have them up the next day and some keep them in bed for two weeks in the same place.

*Unfortunately the discussions by Drs. Mayberry and Long have been misplaced or lost.

With reference to suggestion, I think that is something we should all take heed to, and remember that we can make our patient well or make them sick. We can keep them in bed two weeks or we can have them up in one week if we will.

I, too, have found the rubber tube a very good thing for, as Dr. Blesh has said, the gauze does not do the best and fills up too soon.

Just a word from the standpoint of a general practitioner or country doctor. I always try to impress on my patients that nobody ever dies with appendicitis. That I have never seen a case yet that died of appendicitis. I impress upon them that they should get the appendix out of there before it goes beyond appendicitis and to peritonitis. I may be mistaken in assuming that there are no deaths from appendicitis, but I have never seen one either with operation or without operation.

Dr. A. L. Blesh, closing: Mr. Chairman, the last speaker has hit the keynote of the whole situation. There will be no deaths from appendicitis when prompt diagnosis is made and the patient brought to operation in the early hours before rupture of the appendix has occurred. The important thing to remember is that in the before rupture operations a mortality of less than 1-2 of 1 per cent. can be promised in competent hands. The most important thing to bear in mind is that pus in the abdominal cavity is an imminent danger both immediate and remote, that its best remedy is its operative anticipation. It should be operatively anticipated even though we at times may err in the direction of removing an appendix that is not diseased. At the worst in such a case, we have merely discommoded the patient for only a few days and at the best we have given him a positive insurance against a real danger at a minimum cost and risk. The appendix is even yet, after years of preaching and teaching, most often responsible for the pus belly.

Another important fact to remember is that early operation does not mean an operation done within a certain number of hours, but does mean one done before the appendix perforates, which indeed is a very variable period of time. That a nil mortality must mean an operation done just during this time or in the interval. The interval operation means that the patient has fortunately by the grace of God and not the skill of the doctor, escaped greater dangers during this attack, or these attacks, than the immediate operation would have offered, besides the risk of inflammatory though protective adhesions.

If I were asked what is the greatest fault of our profession in its dealing with the public, I should be compelled to reply, lack of frankness, sometimes lack of common honesty in stating the patient's case to him. The doctor should brief his case to his patient much as the lawyer briefs his cases to the court. Scare heads should be cut out. The people can understand and above all appreciate efforts along this line.

None but urgent cases should be operated upon without painstaking clinical and laboratory examination. This price must be paid if mortality is to be kept low. Patients with kidney and heart lesions are entitled often to operation, but they are also entitled to every safe guard as to anesthesia, time, etc. The laboratory is not the last word, but it is an invaluable aid.

I have reported these cases not that I had anything new to offer, but to emphasize certain old, well known, but often forgotten life saving principles. Appendicitis yet is the cause of too many deaths, and it is a pandora box out of which many other troubles arise.

SO-CALLED CHRONIC APPENDICITIS, WHICH IS LOCATED IN THE CAECUM.*

By FREDERICK A. HUDSON, M. D., Enid, Oklahoma

By chronic appendicitis as designated here, I refer to that class of cases which suffers from pain—or more usually discomfort—in the appendicular region; this discomfort varying in intensity from time to time and usually being not very severe but occasionally simulating a mild appendicitis. There is usually present tenderness upon deep pressure and often a tolerably sharp pain referred toward the umbilicus when the caecum or the appendix is rolled under the fingers. This tenderness, like the discomfort, varies. Sometimes, and especially during the exacerbations, there is some muscular rigidity. The more remote symptoms are, however, more important. Many of these patients are constipated, suffer from so-called biliousness, indigestion and general ill health. Some have symptoms simulating gastric or duodenal ulcer, or cholecystitis. Now, I am aware that these symptoms can very readily be due to appendicitis, proper, and are often relieved by the removal of the appendix. However, in a quite large proportion of cases, appendectomy is followed by a continuation of the discomfort and the constipation, the indigestion, the intestinal intoxication and so forth, and it is this class of cases that I intend to discuss.

The caecum is a blind pouch—it is that part of the large intestine below the junction of the ileum with the colon. It lies in the right iliac fossa upon the iliacus and psoas muscles and is in contact with the abdominal wall. In the foetus, it is cone shaped and passes gradually, instead of abruptly, into the appendix. In adults, it normally varies considerably in size and shape, sometimes retaining many of its foetal characteristics, sometimes globular, but usually with the outer surface more developed than the inner, thus placing the appendix on the inner side near the ileocecal junction.

The caecum and the appendix have the same blood supply and the same lymphatic supply. Especially suggestive are the lymphatics, which drain into nodes in the mesentery at the ileo-cecal angle. The anterior caecal, posterior caecal and appendicular lymphatics are distinct from each other, but they are also absolutely distinct from the surrounding lymphatics of the colon and the pelvis and all drain into the same nodes. In short, the comparative anatomy, the foetal development, the postnatal course and the adult anatomy, point to the possibility that at one time the appendix was a part of the caecum. Now, normally, the caecum is approximately three inches wide and two and a half inches long and movable enough so that it can be brought up into an incision over it. Sometimes it is much longer or greatly distended, both it and the ascending colon above it. Sometimes it is very movable and prolapses into the pelvis, sometimes it is bound down and distorted either by bands of the Jaskson's membrane type or others of unquestionably inflammatory origin. Again the emptying of the ileum into the caecum may be interfered with by kinks or it may be of the foetal or of the four legged type of bowel.

Now, if we have any or several of these conditions, any of which may interfere with the proper function of the caecum, that is, prevent it from lifting its contents upward and expelling it into the colon. We have an organ which you can readily see is similar to a trap on a sink and especially is this true when the caecum is distorted or prolapsed. In other words, we have a receptacle for the intestinal contents to drop into and stay. We have an intestinal stasis, and intestinal stasis is conducive to intestinal inflammation, and then again, intestinal inflammation is conducive to intestinal stasis, and so a vicious circle.

The natural results of these conditions are of course an appendix which tends to become inflamed by extension from the caecum; colonic stasis followed by colonic inflammation and the symptoms named above.

*Read before the Section on Surgery, Oklahoma State Medical Association, Oklahoma City, May 10th, 1916.

This is a very short and imperfect statement of the facts, but the point that I wish to make is that the caecum and the appendix tend to be inflamed together, that appendicitis is in many instances secondary to inflammation of the caecum; that many of the symptoms associated with chronic appendicitis, that is, those due to a chronic colitis, or at least due to a colonic stasis, and even perhaps the local pain and tenderness are more due to the trouble in the caecum than in the appendix.

Consequently, I would suggest that in operating this class of cases, that an incision be made large enough to expose the appendix, caecum and proximal small intestine—that the bowel be examined thoroughly for kinks, bands, adhesions and for mobility and distention. I believe that the most important thing to be done is to eliminate the trap on the sink. Sometimes, perhaps, the colon should be anchored to the flank, but the purpose is usually accomplished by putting in a wide purse-string suture which everts the caecum, with the stump of the appendix. Next, if the caecum and ascending colon are dilated, lessen the size by inverting with interrupted Lembert sutures as far up as seems necessary. I believe that if this is done, there will be new features to get results in operating for chronic appendicitis.

In every case of chronic appendicitis the biliousness, constipation and the indigestion are almost always quickly relieved, remembering one thing that if the condition has been of long enough standing to have resulted in a tolerably severe colitis, that the proper diet and treatment for this condition should be instituted subsequent to the operation.

MEDICAL INSPECTION OF SCHOOLS.*

By G. A. MORRISON, M. D., Poteau, Okla.

The matter of conservation of the health of our school children is a question becoming more prominent in the minds of parents, guardians and teachers, year by year. The experiences and observations of every physician present have awakened him to the necessity of some legal measures, whereby pathological conditions tending to impair the mentality of children of school age can be properly looked after.

In the days when I went to the country school it mattered little whether my face had been properly washed or my hair smoothed into a semblance of form pleasing to look at, or whether my eyes were in proper condition that I might see the work being done on the board, whether my nose was clean or otherwise, whether I breathed through my nose or mouth, whether my teeth were decayed or sound. Apparently, these matters concerned teacher but little. The main point for consideration in that day being that the boy was going to school, having no regard for the effect of my presence from a health standpoint upon other pupils in the school. As we have today, so then we had, the dull boy or girl who was always more or less unhappy, the butt of the scholars and an eyesore to the teacher. The boy or girl who was always being licked for short-comings, regardless of what might be the cause.

Year by year from then to now, conditions of this character have undergone slow but steady improvement, the average school life is today on a much higher plane. The teacher of today, if he or she has been at all observant of conditions, begins to realize there must be a cause for the mental shortcomings of some of their pupils, and naturally try to locate the cause. This in a general way they can find; that is to say, they can recognize in a general way the presence of some physical abnormality that will in a measure at least explain the impairment of the child's mentality. The teacher even in the light of educational advantages of today is not expected to have a profound knowledge of pathology or to be a diagnostician. In consequence of which fact many pathological conditions amenable to treatment are passed by by the teacher and go to form a part of the general summing up of opinion that the child is half-witted and dull.

*Read before Leflore County Medical Society, Aug 3, 1916.

There are so many diseased children in this world of ours, whose lives could be made happy and who could be developed into useful men and women, by proper medical care and guidance in their young days, who are allowed to continue unlooked after year by year, until they develop into mental and moral degenerates. The question of responsibility for these conditions is certainly a serious one, demanding the very best educational efforts of the medical profession along such lines as will develop these unfortunate children into useful men and women.

Every physician under the sound of my voice recognizes in the school children of today, a number of pathological conditions amenable to treatment, which are allowed to go on neglected, the parent or guardian entertaining a careless opinion that the child will outgrow them. The parent wonders why his child does not do better in school; teacher says child is listless and dull, unappreciative, does not learn and is an eyesore to himself and the school; neither teacher nor parent knows why. All this might be cleared up by medical examination. Such an examination resulting in the discovery of adenoids possibly, an error of refraction or some obscure nervous condition, all of which under proper medical or surgical treatment would result in a miraculous change in the child's mental condition, as manifested by the rapid return to a normal mental status. Errors of refraction are more common among children than the laity think. The child is unable to get the image of the object at which he looks properly focused, and in school work is unable to outline figures on the blackboard or to even read properly and makes no progress in his work, becomes nervous and discouraged, perhaps is scolded by his teacher, upbraided for dullness by his parent, jeered at by fellow pupils, all because of a condition which might be readily discovered by medical inspection. Other conditions of school life exist which tend to impair the progress of pupil, yet amenable to medical treatment, which need correction. Then we have to consider the contagious and infectious diseases incident to school age, such as measles, mumps, whooping cough, diphtheria, erysipelas, itch, chicken pox, small pox, etc. The teeth also demand attention, at the hands of parent or medical inspector. The nasal cavities need looking after.

In further consideration of this question, we shall leave out the contagious and infectious diseases, for the reason that our state health law already provides a plan for their disposal. Eliminating from this paper then the discussion of contagious and infectious diseases incident to school life, we have for consideration diseases of the eye, ear, nose and throat.

This class of diseases or defects are exceedingly frequent in school children, and materially hinder the acquirement of an education. Non-advancing pupils constitute a severe trial for teachers, a detriment to schools and by reason of pathological conditions may be a menace to the community. This being true, it is or ought to be to parent and teacher alike, apparent that correction of these conditions renders the community safer and is financially economical.

This brings us squarely up to the question of "What is the best means of obtaining relief?" I assume that this is a matter that cannot be safely left to the parents themselves. Even intelligent parents are incompetent to face this problem, for no matter how well-meaning or solicitous they may be, many serious defects may for a long time remain undetected, without the intervention of a systematic and routine examination. I am inclined to the belief that the matter of public inspection of school children, considered with reference to legislative enactment is largely a matter of education of the school patronizing public, for the reason that in this day and age of graft, the suggestion of an innovation upon the old regime pertaining to schools, excites in the mind of the public more or less resentment. They concluding at once that this is a scheme to give some doctor a job at the expense of the taxpayers. It follows then, that it is the duty of the medical profession to undertake this educational process, not necessarily that the doctor may pick up a few easy dollars, but that the public may see the light, to the extent that when legislative action is proposed they will readily endorse the move with the view of benefiting the future generations.

Many legislative bodies in our land have already enacted efficient laws looking toward restoration and conservation of the health of school children. These laws, of course, are not uniform. In looking over a number of them, I am most favorably impressed with the law of Colorado. This law was passed in 1909, and provides that the State Superintendent of Public Instruction shall have prepared suitable test cards, blanks, record books and other needful appliances to be used in testing the sight, hearing and breathing of pupils in the public schools together with the necessary instructions to the teacher for their use. The teacher or principal in every school, or where there is no principal; the county superintendent, shall during the first month of each school year test the sight, hearing and breathing of all pupils under his charge. Such examination to be made by observation without using drugs or instruments and without coming in contact with said child. A record of such examination shall be reported to the State Superintendent of Public Instruction. In addition to this, every teacher in the public schools shall report the physical, mental, and moral defectiveness of any child under his supervision as soon as such becomes apparent—to the principal, if any, or in his absence to the county superintendent. Such principal or county superintendent shall promptly notify the parent or guardian of each defective child and shall recommend to such parent or guardian that such child be thoroughly examined as soon as possible by a competent physician or surgeon with special reference to the eyes, ears, nose, throat, teeth and spine.

If the parents or guardian of such child shall fail, neglect or refuse to have such examination made and treatment begun within a reasonable time after such notice has been given, the said principal or superintendent shall notify the State Bureau of Child and Animal Protection of the facts; providing, however, that whenever it shall be made to appear to the said principal or superintendent upon the written statement of parent or guardian of said child, that such parent or guardian has not the necessary funds wherewith to pay the expenses of such examination and treatment, the said principal or superintendent shall cause such examination and treatment to be made by a designated physician of the district wherein said child resides; and it shall be the duty of such designated physician to make such examination and treatment. By way of remuneration for such service, the state auditor is hereby directed to draw his order for such sums and at such times as the State Superintendent of Public Instruction may require to carry out the provisions of this act. The total expenses under this act, not to exceed \$1000 in any biennial period.

This in a general way is a summary of the Colorado law, and in my judgment would serve as a foundation upon which to build an Oklahoma better law. In glancing over the Wyoming law passed in 1915, we find this: "The teacher shall employ testing charts of a standard character, approved and supplied by the State Superintendent of Public Instruction, especial attention being given to defects that may be disclosed by the following questions:

- "1. Does the pupil habitually suffer from inflamed lids or eyes?
- "2. Does the pupil fail to read a majority of the letters in the number 20 line of the standard vision chart with either eye?
- "3. Do the eyes and head habitually grow weary and painful after study?
- "4. Does the pupil appear to be cross-eyed?
- "5. Does the pupil complain of earache in either ear?
- "6. Does pus or a foul odor proceed from either ear?
- "7. Can the pupil hear an ordinary voice at twenty feet in a quiet room?
- "8. Is the pupil frequently subject to colds in the head and discharges from the nose and throat?
- "9. Is the pupil an habitual mouth breather?"

Should an affirmative answer be given to any of these questions, the teacher shall give such pupil a report to his parent or guardian on a proper blank prepared

and furnished by the State Superintendent of Public Instruction. The idea of subjecting the pupils to such an examination might at first thought be objectionable on the ground of incompetency, because of the fact that the teacher has no medical education. In answering that objection, it is fair to say that any one who knows enough to be a teacher can easily do the work, as no medical education is necessary to ask these questions.

These are all non-medical questions. The teacher is not expected to express any opinion as to a child's disease, probably will not have any opinion, but will merely know that the child has red eyes or that the ears discharge and smell badly, or that the child is a mouth breather, simply ascertaining the fact that something is the matter. The physician consulted will do the rest. These questions are very simple, yet if they are correctly answered, they will disclose the existence of 80 to 90 per cent. of serious eye, ear, nose and throat diseases. The live teacher will not consider this as extra work, when they think of the enormous benefit to all concerned in this one day's work. That children will be benefitted wherever this plan is adopted goes without saying, because a great majority of the eye, ear, nose and throat diseases will be relieved or cured. The parents will be benefitted because the general improvement in the character of the children incident to relief from their infirmities, will put them in position to be of greater assistance to their parents. The public will be benefitted because education means less truancy and idleness, less vagrancy and crime, less money spent for courts, jails, etc., and more money for the better things, and the teacher will be benefitted because the teaching of stupid or apparently stupid children, is the thorn in the flesh so to speak of their existence, and does more to vitiate their nervous and physical conditions than all their other labors. There is nothing that so handicaps a student to see and hear easily, because practically all school work is done through the agency of these organs of special sense. Without good eyes and ears, the child's education must be gained with proportionate difficulty and proportionate discouragement. Discouragement is followed by indifference to work, then comes truancy, laziness, vicious habits and crime. Such people cause the public more to care for them by way of policeman, charities, courts, reformatories, prisons, etc., than it would cost to correct their diseases and defects, and if necessary to educate them in special schools. Many other states have passed laws for the betterment of children from the year 1909 up to date. Why not Oklahoma? Our state is noted for progressiveness along many lines, provisions have been made for the conservation of the health of our domestic animals, but little if anything has been done in this line for our children. We mature a horse or a cow, or a hog with assistance from the state insofar as pertains to health, and sell them for a profit. We bring our children to the age of maturity unaided by the state insofar as relates to health, and are dependent upon the physical and mental development of them, when they shall have reached the age of maturity for *our* profit. Is it then unfair to ask the state to come to the relief of our children, in the matter of conservation of health in their school days?

The medical profession of the state of Oklahoma is a very large and perhaps the most forceful body of professional men in the state. The combined influence of this body centered on one line of thought or action could not fail to secure results. I have said in this paper that the question of medical inspection of public schools was pretty largely an educational one. Considering the matter then from that standpoint it behooves every physician in the state to get behind the candidate for legislative honor and give him to understand courteously but forcefully that your endorsement for his candidacy depends largely upon his attitude on this important question. Such action on our part may not result in the immediate enactment of law, but will obtain desired results through persistency. As a body of distinguished professional gentlemen, let us not be lacking in our efforts to keep pace with other states along the lines of health conservation, to the end that the Oklahoma boy or girl may step out on the stage of activity after completing the educational course, the peer in the health and character as well as education-

al attainment of the boys and girls of any other state in the Union. We love the Oklahoma boy and girl, and a thrill of pride comes over us when we read of their attainments after school life to the highest planes of a business or a social career.

SOME PROCTOLOGIC DON'TS

By J. M. COOPER, M. D., Oklahoma City

Don't forget that the rectum and sigmoid colon are the parts principally affected in amebic dysentery and these parts must have local treatment together with systemic treatment to effect a cure.

Don't overlook the fact that the ameba dysenteriae is a symbiotic organism and a part of the pathology and symptoms of amebic dysentery is due to the associated organisms and must be dealt with in the treatment of amebiasis.

Don't make the mistake of thinking your case of amebiasis is cured just because the dysentery has ceased. Remember that periods of quiescence are characteristic in this disease; at times the infected person will go for weeks or months without dysenteric symptoms; this is due to the organism becoming encysted, in which state it is non-pathogenic.

Don't neglect to make a microscopical examination in the suspected cases of amebiasis for the finding of the ameba is the only positive diagnosis. Repeated examinations should be made, as sometimes the amebae are few and hard to find. Portions of mucus should be put on slide, covered by the cover-glass and pressure made on cover-glass to thin the specimen, it must be quickly examined as the amebae lose their motility when they become cool. At times the amebae can be more easily found from scraping from the ulcers in the bowel. It is necessary to examine stained specimens to discover the germs associated in symbiosis.

Don't lose sight of the local treatment together with arsenic and emetine in treating amebiasis. Appendicostomy or colostomy are often necessary that the local treatment may be more effectually applied.

The following is report of a case referred to me by Dr. M. Smith. He was called to see patient on the third of August. Patient complained of severe cramps in lower bowels, pain over lumbar and sacral region. Dr. Smith administered opiate for immediate relief and referred the case to me. Mrs. H. C., age 34, occupation housekeeper, married. Has lived in Oklahoma only six months; has lived in Louisiana nearly all her life; last few years lived in California.

Family history. Mother living, in good health. Father died at age 64 years bowel disease of some kind. Two sisters and six brothers, all living in good health.

Past history—as a child she had pertussis, measles, pneumonia and malarial fever. Since girlhood she has had constipation with occasional attacks of diarrhea; complained of indigestion, has gradually lost thirty-five pounds in weight in last twelve years. She has been operated as follows; 1906 fixation of uterus, two years later removal of ovary, and three years ago she had appendicitis and was operated. Had a very severe hemorrhage of the bowel in 1915. For the last few weeks she has had very few bowel operations without an enema.

Present history. Very weak, some cramping, bowel operations too frequent but not so bad as the day before. Pain is severe over lower lumbar and over sacral region, this pain extends down legs. She is becoming more nervous all the time.

Examination throws no light on diagnosis except we find mucous membrane of the rectum and colon hyperemic, edematous, no active ulcerations but certain pints of scar tissue as a result of former ulcers. There was some mucus. Microscopical examination of the mucus failed to reveal ameba dysenteriae.

On third day she returned to office, at which time, I was unable to find any mucus and for about three weeks she continued to improve. I was making an

effort all this time to prove my diagnosis. Finally I administered calomel by mouth and cacodylate soda hypodermatically; this was given to produce an irritation in the bowel, which would cause the amebae to become active, if they were present, and give an opportunity to make a positive diagnosis. On September 4th there was some dysentery and a great deal of flaky mucus. The ameba dysenteriae was found and the bacillus coli was also present in great numbers.

Patient is now doing well on the following treatment: Emetine and arsenic hypodermatically, tincture iodine irrigations, and local applications through sigmoidoscope.

The most interesting point in this case, in my opinion, was the difficulty in making positive the diagnosis. The amebae became encysted, in which state they were non pathogenic. This was the condition during the quiescent period, but upon the administration of the arsenic and calomel the ameba became active and consequently the diagnosis was made positive by finding the organism.

This case should be kept under observation from four to six months after all symptoms of amebiasis have disappeared.

PSEUDO-APPENDICITIS

F. G. Connell, Oshkosh, Wis. (*Journal A. M. A.*, July 29, 1916), says that the question of acute appendicitis is settled, at least for the time being. The method and time of treatment and postoperative measures are practically uniform; delay in proper treatment is usually due to uncertainty in diagnosis and the inexcusable estimated general hospital mortality of 10 per cent. is due to the failure of some one to recognize the well-accepted principles of surgical diagnosis or treatment. The problem of chronic appendicitis calls for attention, not on account of high mortality rate, but of a more disconcerting morbidity rate—the postoperative persistence of symptoms. When a patient complains of the same symptoms after appendectomy as before operation, we may reasonably believe that they were not due to the appendix and that the diagnosis was incorrect. He divides these cases into two classes: those in which the proper diagnoses have been subsequently obtained and those in which the persistence of the symptoms has not been rationally explained, and which might be well called pseudo-appendicitis. Between January, 1909, and January, 1916, he has found eighty-seven records in which the removal of the appendix or the interval operation for appendicitis had not been followed by relief of symptoms; forty-eight of these were operations of his own. During the same time there were 212 patients operated on, all told, for chronic appendicitis. He gives a detailed review of these cases, not as case reports, but analyzed according to the histories and symptoms, the findings and results. In his conclusions, he says that after elimination all demonstrable pathologic conditions that might possibly be confused with chronic appendicitis, there remains in certain cases some cause for pain in the right iliac fossa other than the appendix, the exact nature of which is not definitely known. Such cases are frequently associated with visceral ptosis, constipation and neurasthenia. Appendicitis, either acute or chronic or when there has been an unquestioned inflammation, calls for surgery, but pseudo-appendicitis, on the other hand, is a nonsurgical condition, hence the need of a differentiation between these conditions. Every case of so-called chronic appendicitis that is associated with enteroposis, constipation and symptoms of nervous instability should be looked on as pseudo-appendicitis, until careful and painstaking study of the history and clinical findings prove it otherwise. The advisability of seeing the patient in one of these attacks is pointed out. While an entirely satisfactory explanation of this type has not been found, study suggests that a lack of balance between the vagus and sympathetic divisions of the autonomic nervous system may be an etiologic factor, and this in turn may be due to an abnormal function of some of the endocrine glands.

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EDITORIAL**UNREST AS TO MEDICAL FEES.**

Throughout the United States there is a growing tendency in the medical profession to raise fees for services. This activity undoubtedly rises from the tendency of many states to fix the charges a physician may legally collect where the Workman's Compensation Law is in effect. It is a question that we must face and settle in our own state for there is a suspicion that the Industrial Commission may fix an inflexible schedule at any time. There is a great deal of dissatisfaction with the present law on the part of workmen covered by it. Their principal objections are that the compensation should begin within one week and should be larger than it now is. There is a suspicion, too, that much of the unrest is artificially created by the attitude of unprincipled lawyers, commonly known as "snitches," who before the enactment of this law bilked corporations with or without cause. The law has cut their revenue and they are opposed to it. The medical profession is inclined to make their charges very reasonable and much less than is ordinarily charged the average individual for similar services, but they feel if they are to be restricted by a fee bill limiting them to 50 cents a mile, \$5.00 for anesthetics, \$2.50 to \$50.00 for amputations, \$2.00 to visit an injured person and make a report, that society must make up the deficit, for such charges are not a living wage and the "Laborer is worthy of his hire."

The San Francisco County Medical Society has met the matter by adopting a fee bill calling for \$5.00 for day visits and \$10.00 for night visits, and other things in proportion.

If Oklahoma proposes to require doctors to practically give their services gratuitously, the profession certainly proposes to make and must make a marked increase in charges to private patients who are able to pay a fee in keeping with their social importance and financial ability to pay.

TUBERCULOSIS WEEK.

We now call attention to Tuberculosis Week, December 3-10, in order that our membership may have sufficient time to prepare for this important time and occasion.

It is the desire of the National Association for the Study and Prevention of Tuberculosis that this be made the banner year in constructive and effective work. The principal criticism of work or attempts at work along this line in Oklahoma heretofore has been that too little attention was given to maturity of plans in advance and execution of program. In some instances, attempts have been made to observe tuberculosis day throughout a county, in the churches and schools, with less than a week's preparation; during this week the speakers had to be selected and assigned, and they in turn had to prepare their addresses, the result of the whole naturally being nearly no accomplishment.

If we propose to make any progress in the control of tuberculosis we should begin now to make plans for that week.

The Oklahoma State Anti-Tuberculosis Association, Dr. C. R. Day, President, and J. C. Mahr, Secretary, Oklahoma City, are ready to co-operate with any community or organization of physicians in furthering the success of this movement. As representatives of the National Association, they invite suggestions and co-operation from the profession.

ABSTRACTS AND REVIEWS

CONDUCTED BY

DRS. L. F. WATSON AND L. J. MOORMAN, OKLAHOMA CITY,
AND FRED J. WILKIEMEYER, MUSKOGEE

REGENERATION OF BONE.

Dr. F. D. Smith, Chicago, *American Journal of the Medical Sciences*, July, 1916, observes that one of the earliest and foremost investigators in this field of research was the French naturalist, Duhamel du Monceau, who, in 1739, called attention to the active role played by the periosteum in the regeneration of bone. But the exhaustive work of the eminent French surgeon, Dupuytren, placed the subject upon a scientific basis.

He concludes as follows: Osteogenesis is not a specific attribute of any tissue or layer of cells, but is limited entirely to the osteoblasts which are scattered throughout the entire structure of the osteoplastid and the host. Mature bone cells are end products, and while they may undergo mitosis under artificial conditions, this process is unknown in the human economy. Many mature bone cells of a transplant remain alive, especially near the periphery of the transplant, and control its surrounding calcified matrix. Absorption of isobone is influenced in many cases by the treatment received by the transplant. Protoplasmic poisons should not be employed during bone grafting procedures. Regeneration of bone for the most part is an indirect process through the differentiation of the osteoblast to a mature bone cell. A transplant is subject to the varying demands of its environment; functional demands producing an increase in bone deposition; lack of functional demands causes atrophy and absorption. Bony contact is not essential to regeneration of bone, but for practical purposes, doubly insures the result desired. In the transplantation of any bone, the most that can be hoped for is the continued development of the implanted osteoblasts, together with such stimulus as may be obtained from the osteoblasts of the host and the retention of vitality in some of the transplanted bone cells with their corresponding intercellular calcium matrix. The transplant in the presence of an infection may or may not survive, and is dependent upon the type of the infecting agent. The medullary transplant is not a permanent entity, but is absorbed as soon as all functional demands are removed.

Watson.

THE INDICATIONS FOR VENESECTION

Dr. E. J. G. Beardsley, Philadelphia, *International Clinics*, Vol. 2, states that no general rule can be laid down as to the amount of blood that should be extracted. One must bleed for effect, and when the effect is obtained the venesection is discontinued. Bleedings vary in amount from six to fifty ounces. The danger, however, lies in bleeding too little rather than too great a quantity and the more one uses venesection the more one is inclined to bleed freely where venesection is indicated.

Venesection may be used with benefit for symptomatic relief in the following conditions: acute alcoholism, angina pectoris, apoplexy, cardiac insufficiency, convulsions, delirium tremens, nephritis, pneumonia, pulmonary congestion, pulmonary oedema, uraemia. It is probable that no single treatment, other than drug therapy, has been more widely practised in the past and in all parts of the world. The beginning of the use of venesection as a therapeutic measure dates back to the most ancient times in medical history. As a method of obtaining symptomatic relief venesection had always been popular with past generations of physicians and surgeons until relatively recent times. We are all well

aware that there have been in the past and exist at present many useless fashions and fads in medical practice that come and go as do the fads and fashions in dress, literature, and politics. It is indeed unfortunate, however, that a procedure so valuable as venesection should have been considered a fad and for a time almost completely abandoned by the majority of the members of the medical profession.

Watson.

THE USE OF FREE OMENTAL GRAFTS IN ABDOMINAL SURGERY

Dr. Leonard Freeman, Denver, *Annals of Surgery*, January, 1916, remarks: Although the omentum is constantly before the abdominal surgeon, even in his way, there seems to be a general failure to recognize the important surgical uses to which it may be put, and especially is this true of free omental grafts. A well known function of the omentum is its almost intelligent inclination to seek out and attach itself to raw or inflamed surfaces, wrapping itself around them in such a way as to afford a maximum of protection. When the inflammation has subsided or the need for protection has ceased, these adhesions tend to disappear, however firm and voluminous they may be; so that if the abdomen is again opened, slight is any vestige of them will be found. Every surgeon must be familiar with this striking phenomenon. In other words, Nature often uses the omentum within the peritoneal cavity much as a surgeon employs adhesive plaster or a dressing externally for temporary protection only. This marked inclination of the intact omentum to adhere to its surroundings is also possessed by free omental grafts, which always may be transplanted with great certainty except in the presence of actual suppuration. When this fact is thoroughly appreciated the way is open to a variety of useful and even life-saving plastic procedures, such as the replacement of lost portions of peritoneum, the prevention of adhesions, the strengthening of suture lines, the occlusion of the pylorus or of the intestine, and the checking of hemorrhage.

Watson.

STOMACH TROUBLES—THEIR SIGNIFICANCE

Dr. Francis Reeder, St. Louis, *The Journal of the Missouri State Medical Association*, September, 1916, states that when we consider such a collective diagnosis as "stomach trouble," we cannot fail to be impressed with its far-reaching meaning. To crystallize such a meaning into a more intellectual concept not only necessitates a correct interpretation of the clinical symptoms of the abdominal organ at fault and responsible for the gastric disturbance, but it also requires a proper differential diagnosis from a lesion that actually may exist in the stomach.

Vomiting is usually the act which attracts attention directly to the stomach, and is in a great measure responsible for the appellation "stomach trouble". Be its occurrence early or late, mild or violent, it invariably ends a serious aspect to the clinical picture, and if persistent engenders an apprehension that it is well not to ignore.

In the citation of the abdominal lesions which inveigle the stomach into giving a morbid expression for them, I may state here with some conviction that out of a hundred cases where the gastric disturbance has predominated, possibly ten may show a stomach lesion. No attempt has been made to so picture the vomiting as to make it appear that this symptom was one of value in diagnosing or differentiating the various abdominal lesions. This is not the intention. The object is simply to show how readily a diseased organ may, through a reflex act, incite in a healthy organ a train of symptoms, prominent amongst them vomiting, which could readily be interpreted as a "stomach trouble."

Watson.

SOME BODILY CHANGES DURING ANESTHESIA

Dr. Frank C. Mann, Rochester, Minn., *The Journal of the American Medical Association*, July 15, 1916, states that in studying the bodily changes due to an anesthetic or occurring during the anesthetized state, it is necessary to differentiate carefully the effect of associated conditions. The preliminary excitement, struggling, asphyxia and other accompanying phenomena produce changes quite apart from the anesthetic itself. The compensation physiologic mechanism necessary in light anesthesia is probably not the same as when a deep anesthetized state is produced. A short or long period of anesthesia may differ only in degree, provided the anesthetic tension remains the same. The present investigation deals mainly with a study of the blood of dogs under ether anesthesia.

Watson.

REMOVAL OF THE RIGHT COLON: INDICATIONS AND TECHNIC

Dr. Charles H. Mayo, Rochester, *The Journal of the American Medical Association*, September 9, 1916, remarks that for many years the indications for the surgical treatment of megacolon, tumors, fistulas and some diseases of the colon have been definite. The principles involved and the technic employed have been carefully considered along lines of theoretical, experimental and practical development. The results of cure or relief within the natural limitations of the character and the extent of the diseases have been excellent. Within a few years still greater progress has been made in our knowledge of diseases of the colon, largely because of the endeavor to treat surgically not only stasis as an entity, but also various acute and chronic diseases, general and local, resulting from it, or, when other cause is not apparent, presumed to result from it. Thus, in chronic changes in the circulation, such as an endarteritis, in the nervous system, such as in epilepsy and neurasthenia, in muscle degeneration, rheumatoid arthritis, enteroptosis and various chronic so-called toxic diseases, surgical treat-

ment by removal or short circuiting the bowel was along lines already developed for the removal of tumors or the treatment of obstruction.

It is to be noted that in those operations in which the colon is removed—for example, Lane's operation—or in which in certain diseases it is rendered completely functionless for considerable periods of means of a low ileostomy as advocated by Brown, the lower ileum becomes dilated and takes the place of the colon. Clark shows the dilatation of the ileum to be regular following colectomy. In low ileostomy the fluid contents of the ileum soon thicken, and emptying occurs at intervals with less gas and little odor.

Watson.

INDICATIONS FOR SPLENECTOMY IN CERTAIN CHRONIC BLOOD DISORDERS

The Technic of the Operation

Dr. Donald C. Balfour, Rochester, *The Journal of the American Medical Association*, September 9, 1916, states that Splenectomy has already proved a curative measure in certain diseases associated with definite blood changes, and the operation has recently been advocated for other diseases which appear to be more or less closely related to those in which the spleen is now the known causative factor. The basis on which splenectomy has been suggested in these heretofore incurable conditions will be more clearly understood if we briefly review the development which has resulted in the present situation.

Splenic anemia offers the most familiar example of the therapeutic value of splenectomy. Sufficient time has now elapsed since the earlier operations for this disease to prove that the results of splenectomy in early or in moderately advanced cases are not only excellent, but permanent. The most interesting characteristic of the disease as concerns the purpose of this paper is its tendency to develop cirrhotic changes in the liver. In fact, Banti described the disease as it appeared in its later stage when it is associated with marked cirrhosis and with ascites. In such a stage, from a diagnostic standpoint, it is often difficult and sometimes impossible to determine in a given case whether the condition is the result of a true splenic anemia or of a primary liver cirrhosis associated with a large spleen. Experience has shown that in the very late stages of splenic anemia definite improvement following splenectomy cannot be expected, yet it is also true that a moderate cirrhosis, even associated with ascites, has been present in some cases in which excellent results have been obtained.

We believe that splenectomy should be considered in every case of pernicious anemia in which the diagnosis has been established and all possible etiologic factors which might be independently remedied have been excluded. The failure of other means to combat the disease, the previous fatal prognosis, and the low operative mortality are strong arguments in favor of splenectomy. Contraindications must be positive and adequate. Granting this, however, we must be cautioned by our imperfect knowledge of the surgical indications. The conservative selection of cases is therefore advisable.

Watson.

PRECANCEROUS CHANGES IN THE UTERUS

Dr. Williams S. Stone, New York, *Surgery, Gynecology and Obstetrics*, September, 1916, relates that numerous conditions are recognized clinically as preceding or associated with cancer of the uterus in a variable percentage of cases. Trauma of the cervix during parturition, resulting in a variable amount of ectropion, is generally regarded as an important factor in the etiology of cancer of the uterine neck, but is far from being established. Chronic inflammatory diseases are becoming more definitely recognized as antecedents of neoplastic growths in the uterus, as well as in the breast and other organs. Clinical observations increasingly confirms the sequence of definite benign lesions in the uterus and cancer, but its evidence is thus far too scanty to confirm or deny their histogenetic relations. There is no reason to assume that precancerous changes without treatment always develop into malignant growths. It has been noted that a certain type of early cancer spreads superficially over wide areas before showing marked invasive feature; this may account for the wide spread extent of the process before receiving the attention of the clinician. Atypical bleeding or discharge with other symptoms and a physical examination can not be depended upon for a definite diagnosis; a histologic examination of the tissues or mucosa is needed to make the diagnosis certain.

Watson.

PERSONAL AND GENERAL NEWS

Dr. H. W. Doty, Homestead, is moving to Watonga.

Dr. and Mrs. W. T. Howell, Duncan, are visiting in California.

Dr. C. C. Bombarger, visited Texas and New Mexico in August.

Dr. J. M. Workman, Woodward, is visiting the Chicago clinics.

Dr. T. H. Fletsher, Edmund, visited the Mayo clinics in August.

Dr. A. M. Cooter, Miami, took a vacation in Colorado in August.

Dr. G. H. Wallis, Cheyenne, visited the Chicago clinics in August.

Dr. C. T. Schrader, Bristow, is making an automobile trip in Colorado.

Dr. L. B. Sutherland, Ringling, spent September in the Chicago clinics.

Dr. J. A. Burnett, of Hartshorne, has moved to Crum Creek.

Dr. A. S. Risser, Blackwell, has returned from his vacation in Colorado.

Dr. Earl D. McBride, Ralston, attended the New York clinics in August.

Dr. W. Kelly, Terlton, with his family, spent their vacation in Missouri.

Dr. Walter Hardy, Ardmore, visited the Mayo clinics in August and September.

Drs. T. D. Roland and G. S. Baxter, Shawnee, visited the Mayo clinics in August.

Dr. and Mrs. C. W. Stewart, Hobart, made a trip to Prescott, Arizona, in August.

Dr. C. W. Tedrowe, Elk City, visited St. Louis, Chicago and New York clinics in August.

Dr. M. P. H. White and family, Clinton, spent their vacation on the doctors ranch near Pampa.

Dr. Lea Riely, Oklahoma City, attended the John Hopkins and University clinics in August.

Dr. E. Brent Mitchell, Lawton, made an automobile trip to his old home in August and September.

Dr. Loyal Martin, Newkirk, announces the opening of his hospital, the first Newkirk has ever had.

Dr. Howard Webber, Bartlesville, has been selected as Elector on the Democratic State Ticket.

Dr. and Mrs. A. A. Will, Oklahoma City, have returned from a vacation spent at Ludington, Michigan.

Dr. H. H. Cloudman, Oklahoma City, has assumed the duties of athletic director of Oklahoma City High School.

Dr. E. B. Dunlap, Lawton, has resigned from the Medical Reserve Corps at Ft. Sill, where he has been stationed for some time.

Dr. S. C. Davis, formerly of Weatherford, who has been in New York City for six months has returned and will locate in Clinton.

Dr. Lelia E. Andrews, Oklahoma City, visited New Orleans in September, going by boat from that point to New York City, where she will spend the month in post-graduate work.

Dr. Paul H. Crawford and Miss Helen McKee, Oklahoma City, were married September 7th in that city. They will visit Washington and other eastern cities on their bridal tour.

Dr. Fowler Border, Mangum, has launched himself on the sea of journalism, purchasing the Mangum Star and Greer County Democrat. The business of both papers will be consolidated.

Dr. F. J. Boutin, Coyle, member of the Logan County Society, died after an extremely short illness from heart disease, August 26th. Dr. Boutin was 61 years old at the time of his death. His body was buried in Geneva, Iowa.

Dr. F. K. Camp, Superintendent, Wesley Hospital, is spending a month in New York, Baltimore, and Washington. While away, he will attend the meeting of the American Hospital Association and the Congress of Surgeons in Philadelphia.

Dr. Hugh Scott, formerly of the Oklahoma National Guard, accompanied by his family are now on their way to the Philippines. Dr. Scott is attached to the U. S. Army Medical Service and will be especially missed in Oklahoma military medical circles.

Drs. J. R. Collins and J. P. Sudderth, Nowata, narrowly escaped death when Dr. Collin's car turned turtle near their home. Dr. Collins sustained a fractured shoulder, broken ribs and many minor injuries, while Dr. Sudderth escaped with simple bruises.

The Wesley Hospital announces that Drs. D. D. Paulus and J. H. Sturgeon have been added to the members of salaried officers as resident physicians of that institution. They both come from Cook County Hospital, Chicago, and served 18 months internship.

Dr. Geo. A. Boyle, Enid, on returning from Minnesota, announces his firm allegiance to Izaak Walton and all pertaining to him. He says that a few days on the Minnesota Lakes: "If you enjoy casting—and the music of the reel—and the thrill when you hook a big fighter * * * * go up to Minnesota. It will put a new light in your eyes, color in your cheeks and add whole years to your life".

Parke Davis & Company, Detroit, are celebrating a half century's progress this month. This great house started in business fifty years ago when manufacturing of pharmaceutical products and their allied sciences, bacteriology, pharmacology and pharmaceutical chemistry were then unknown. A great deal of the advance in serology and vaccine has been made by our commercial organizations, among which Parke Davis & Company has well held their own. We congratulate this house on its advancement.

Oklahoma City and Stroud physicians have announced that they will have to charge more for professional services in the future. The raise in Oklahoma City is from \$2.00 to \$3.00 for day calls, and from \$3.00 to \$4.00 for night calls; other matters in proportion. In Stroud, the raise is from \$1.50 to \$2.00 for day calls, \$2.00 to \$3.00 for night calls. It should not be forgotten that ours is the only profession probably that gets into a rut and stays there when it comes to making charges. Everything we use has advanced enormously in the past few years, yet our charges remain the same.

Dr. John W. Duke, State Commissioner of Health, assisted by a number of volunteer physicians, is making a through inspection of the physical conditions of the inmates of our state institutions. As the survey progresses, such defects as are found that may be remedied are corrected on the spot. In addition to this, the entire sanitary situation is closely inquired into, water, food, clothing and supplies are examined and, wherever possible or necessary, changes for the better are made. Recently at the Pryor State Orphan's Home, Dr. W. E. Dixon, Oklahoma City, operated a large number of the children for tonsils and adenoids. Drs. Griffin of Norman, Adams and Hayes of Vinita, Mitchell of Stigler, Whitaker, Mitchell and Puckett of Pryor, Fite and Thompson of Muskogee, assisted in the work. Dr. Duke proposes to continue this work until the physical condition of the inmates of all State Institutions is thoroughly inquired into and, wherever possible, improved.

CORRESPONDENCE AND MISCELLANEOUS

STATE BOARD OF HEALTH MINIMUM REQUIREMENTS FOR THE CONTROL OF POLIOMYELITIS

(Infantile paralysis)

Rules and regulations formulated and adopted by the Oklahoma State Board of Health, Guthrie, Oklahoma, August 25, 1916.

1. **Reports.** Every physician, attendant, parent, householder or other persons having knowledge of a known or suspected case of acute anterior poliomyelitis (infantile paralysis) must immediately report the same to the local health authorities.

2. **Placarding.** Whenever a case of acute anterior poliomyelitis is reported to the local health authorities, they shall affix in a conspicuous place at each outside entrance of the building, house or flat, as the case may be, a warning card. Defacement of such placards or their removal by any other than the local health authorities or the duly authorized representative of the State Board of Health is strictly prohibited.

3. **Quarantine of Patient.** All cases of acute poliomyelitis must be quarantined for at least six weeks. Quarantine must not be raised, however, until the premises have been thoroughly disinfected by or under the supervision of the health officer. All persons continuing to reside on the infected premises shall be confined to the infected premises until quarantine has been raised, except as hereinafter provided.

No one but the necessary attendant, the physician, the health officer and representatives of the State Board of Health may be permitted to enter or leave the infected premises. Upon leaving they must take all precautions necessary to prevent the spread of the disease. The nursing attendant may leave the premises only on permission granted by the local health officer.

4. **Quarantine of Exposures.** Members of the family over 16 years of age may be removed from the infected premises, upon permission granted by the local health officer after thorough disinfection of person and clothing.

Children of the family may be removed from the infected premises upon permission of the local health officer, after thorough disinfection of person and clothing. Such children may be removed only to premises upon which none but adults reside and must be confined to the premises (in the house) for two weeks from date of removal, during which period they must be kept under close observation by the local health authorities, and no child shall be permitted to visit or otherwise come in contact with them during this period. They must not return to the infected premises or come in contact in any way with the patient or attendant, until quarantine has been terminated.

All children who continue to reside on the infected premises must be held under close observation for at least two weeks following termination of last case on the premises.

5. **Exclusion from the Schools, etc.** All children who continue to reside on the infected premises must be excluded from the schools and other public gatherings for at least two weeks following date of raising of quarantine.

All children who have been exposed to the disease and who have been removed from the infected premises, in accordance with the provisions of rule 4, must be excluded from the schools and from all public gatherings for at least two weeks from date of last exposure.

The patient must be excluded from the schools and all public gatherings for at least two weeks after quarantine is raised.

School teachers and other persons employed in or about a school building, who have been exposed to the disease must be excluded from the school building and grounds for a period of two weeks following date of last exposure and until persons and clothing have been thoroughly disinfected.

Whenever the schools are closed on account of an outbreak of acute poliomyelitis, children under 16 years of age shall be excluded from Sunday schools, churches, picture shows and all other public gatherings and shall be confined to their own premises.

6. **Precautions.** No persons, except the necessary attendant, the physician and the health officer may be permitted to come into contact with the patient. Such persons must not handle or prepare food for others and their intercourse with other members of their household must be as restricted as possible.

The infected premises, especially the sick room, shall be thoroughly screened against flies and any such insects as may enter the sick room shall be exterminated therein. All toilets used by the patients or attendants and those in which discharges from the patient are deposited must be thoroughly screened against flies and freely treated with an approved disinfectant.

7. **Removals.** No person affected with acute anterior poliomyelitis shall be removed from the premises upon which he is found unless consent to such removal be first obtained from the local health authorities or the State Board of Health and then only after strict compliance with the provisions of these rules. Under no circumstances shall permission be granted for the removal of any

patient or article from the infected premises to any premises upon which milk or other food stuffs are produced, sold or handled.

No person affected with acute anterior poliomyelitis shall be removed from any city, village, township or county in which he is found unless consent to such removal be first obtained from the State Board of Health.

8. Sale of Milk and other Foodstuffs from Infected Premises Prohibited. Whenever a case of acute anterior poliomyelitis shall occur on any premises where milk or other foodstuffs are either produced, handled or sold, the sale, exchange or distribution on such premises in any manner whatsoever, or the removal from the infected premises of milk, cream, any milk products or other foodstuffs until the case has been terminated by removal, recovery or death, and the premises and contents and all utensils have been thoroughly disinfected under the supervision of the local health authorities, is prohibited. Provided, that in the event of acute anterior poliomyelitis occurring on a dairy farm the live stock, the properly sterilized milk utensils and delivery outfit, may be removed to some non-infected premises and the milking done and milk cared for and sold from such other premises by persons other than those of the household of the person so affected, upon obtaining permission to do so from the local health authorities or the State Board of Health.

Whenever a case of acute anterior poliomyelitis shall occur on premises connected with any store, such store shall be quarantined until the case has been terminated by removal, recovery or death, and the premises are thoroughly disinfected, provided, however, that if the premises are so constricted that the part in which the case exists can be and is effectively sealed, under the supervision of the local health authorities, from the store, and provided further that the employees and all other persons connected with the store do not enter the part of the premises where the case exists and do not come in contact with the patient, his attendant, or any article whatsoever from the quarantined premises, the store attached to the quarantined premises need not be closed.

9. Delivering of Milk, Groceries and Other Necessities. Milk, foodstuffs and other necessities may be delivered at the quarantined premises, but there must be no contact between the patient or attendant and the delivery agent. The householder must provide a sterilized container (a freshly scalded bottle or pail) to receive the milk, and the delivery agent must not handle this bottle or pail in making the delivery.

No milk bottle, basket or any other article whatsoever may be taken out of or away from the infected premises during the period of quarantine. Before milk bottles are removed from the premises after quarantine is raised they must be sterilized under the direction of the local health authorities. Mail which has been handled by the patient or attendant must not be taken from the premises.

10. Disinfection. All articles taken from the sick room must be disinfected upon removal. Exposure in the open air of carpets, rugs, curtains, bedding and similar articles from the infected premises for the purpose of airing, shaking, beating or sunning is strictly prohibited, unless, in the opinion of the local health authorities, such may be done without danger of the spread of the disease.

Books, toys and other similar articles used to amuse the patients are best disposed of by burning. Under no circumstances should borrowed toys or books be returned. *Library and school books must not be returned; they must be burned.*

Bed and body linen which has been in contact with the patient and handkerchiefs or cloths which have been used to receive discharges from the patient must be immersed in an approved disinfectant before removal from the sick room, and after removal should be boiled.

All discharges from the patient must be thoroughly disinfected before removal from the sick room.

No article of clothing, or other article, may be removed from the infected premises to a laundry or other place for washing unless previously disinfected by immersion in an approved disinfectant, and the approval of the local health authorities has been obtained.

House animals such as cats, dogs or any other household pets and all other animals or fowls must be strictly excluded from the infected building, house or flat, as the case may be, during the entire period of quarantine. Any such animals which have been in contact with the patient must be subjected to a thorough disinfecting bath before removal from the infected building, house or flat, and must not be permitted to reenter the same. Such animals must be confined in an outbuilding. Dogs and cats running at large should be destroyed.

Before quarantine is raised the infected premises and all articles of furniture and clothing therein must be thoroughly disinfected by or under the supervision of the local health authorities in a manner approved by the State Board of Health.

11. Deaths, Burials and Transportation of the Dead. When the body of anyone dead from acute anterior poliomyelitis is to be transported by railroad or other common carrier, the official rules of the State Board of Health governing the transportation of the dead must be observed.

THE BURDEN OF DAMAGE SUITS.

The snitch lawyer is one of our costliest nuisances. Just how much he costs us is hard to figure out. Recently addressing the Oklahoma Bar association John W. Shartel of this city estimated the expense of damage suits in Oklahoma at \$600,000 a year. The railroads, Mr. Shartel said, spent

\$650,000 yearly investigating and defending damage suits. All this means heavier taxes and higher freight rates. "It would be cheaper," Mr. Shartel says, "for the people to tax themselves and pay the claimants directly."

Discussing Mr. Shartel's statements, the Kansas City Times suggests a commission empowered to prevent the bringing of damage suits with no merit. It is possible some relief might thus be had. The danger of vesting such powers in a commission is obvious, however, and it would doubtless be a difficult thing to do constitutionally. Yet something must be done, for the evil is nation-wide and growing instead of diminishing.

The real solution, in our judgment, lies in purifying the source whence the snitch lawyer sprang. That, of course, is the legal profession. New requirements for entering that profession would help, but higher standards of professional deportment must be established and maintained. And such standards, to be effective, must apply not only to the recognized snitch, but also to many lawyers who wear the insignia of eminence.

What is the genesis of the snitch lawyer? Clearly he is a reaction. He is an answer to the claim agent. He is the reply of justice outraged, to claims settled by wit, by bargaining, by power—by everything, in a word, except equity. The snitch and his contingent fee are no more offensive to the blind goddess than is the rare legal attainment that sells itself without reserve and without condition to the unscrupulous corporation. It may even be doubted if he is any more costly.

The legal profession must heal itself. The job is going to call for surgery.—*Oklahoman*.

Cement, Okla., August 26, 1916.

Editor Oklahoma State Medical Association Journal.

Dear Sir:—

In the current issue page 248 is an account of a mule taking a trip through the intestinal tract of a child. This case interested me from the fact that I had a case almost exactly similar about two years ago.

A child about the same age as the case reported by Dr. Heitzman was brought to me by the parents, who stated that something was lodged in the rectum and was causing the child considerable pain. On examining the rectum I found the mule presenting and readily delivered it after administering an anesthetic.

This mule looked exactly like the one pictured in the Journal altho the parents did not know that the child had swallowed it until it reached the rectum. This child was seen playing with the mule a few days before its appearance as stated. No discomfort or ill feeling was noticed in the child after swallowing the mule.

Fraternally,

Jesse Bird, M. D.

NEW AND NON-OFFICIAL REMEDIES

Ampoules Mercuric Salicylate—Squibb, 0.065.—Each ampule contains 0.065 gm. mercuric salicylate, N. N. R., in 1 cc. of sterile suspension. E. R. Squibb & Sons, New York.

Ampoules Quinine Dihydrochloride—Squibb, 1 gm.—Each ampule contains 1 gm. quinine dihydrochloride, N. N. R., in 2 cc. of sterile solution. E. R. Squibb & Sons, New York.

Ampoules Quinine Dihydrochloride—Squibb, 0.5 gm.—Each ampule contains 0.5 gm. quinine dihydrochloride, N. N. R., in 2 cc. of sterile solution. E. R. Squibb & Sons, New York.

Ampoules Quinine Dihydrochloride—Squibb, 0.25 gm.—Each ampule contains 0.25 gm. quinine dihydrochloride, N. N. R., in 2 cc. of sterile solution. E. R. Squibb & Sons, New York.

Ampoules Quinine and Urea Hydrochloride—Squibb, 1 gm.—Each ampule contains 1 gm. quinine and urea hydrochloride, N. N. R., in 2 cc. of sterile solution. E. R. Squibb & Sons, New York.

Ampoules Quinine and Urea Hydrochloride—Squibb, 0.5 gm.—Each ampule contains 0.5 gm. quinine and urea hydrochloride, N. N. R., in 2 cc. of sterile solution. E. R. Squibb & Sons, New York.

Ampoules Quinine and Urea Hydrochloride—Squibb, 0.25 gm.—Each ampule contains 0.25 gm. quinine and urea hydrochloride, N. N. R., in 2 cc. of sterile solution. E. R. Squibb & Sons, New York.

Ampoules Quinine and Urea Hydrochloride—Squibb, 1 per cent.—Each ampule contains 5 cc. of a sterile 1 per cent. solution of quinine and urea hydrochloride, N. N. R. E. R. Squibb & Sons, New York.

Ampoules Sodium Cacodylate—Squibb, 0.13 gm.—Each ampule contains 0.13 gm. sodium cacodylate, N. N. R., E. R. Squibb & Sons, New York.

Ampoules Sodium Cacodylate—Squibb, 0.05 gm.—Each ampule contains 0.05 gm. sodium cacodylate, N. N. R. E. R. Squibb & Sons, New York (Jour. A. M. A., August 5, 1916, p. 437).

Ampoules Mercury Iodide (Red) 1 per cent. in Oil—Squibb.—Each ampule contains 1 cc. of a solution of red mercuric iodide and anesthesin, each 0.01 gm., in a neutral fatty oil. E. R. Squibb & Sons, New York. (Jour. A. M. A. August 19, 1916, p. 586.)

PROPAGANDA FOR REFORM.

Chemotherapeutic Treatment of Tuberculosis.—In the August issue of The Journal of Experimental Medicine Koga, Otani and Takano report on a new treatment of tuberculosis and leprosy. Koga reports that the treatment of animals inoculated with a preparation of copper and potassium cyanide produces healing changes in tuberculous lesions. He also reports on the treatment of sixty-three cases and thinks that his preparation, which he calls "cyanocuprol," greatly improves or cures pulmonary tuberculosis in the first or second stages and even is beneficial in the third stage. Otani also gives a favorable clinical report of tuberculous cases. Takano treated cases of leprosy with "cyanocuprol" with what appear to be beneficial effects. The Japanese investigators give no clear statement in regard to the composition of the coppercyanide preparation which they used (Jour. A. M. A., August 5, 1916, p. 443).

Ambrine.—An article, "War Letters of an American Woman," in the August 2 issue of Outlook contains a glowing account of the use of "Ambrine" in the treatment of burns by a Dr. Barthe de Sandfort, Hospital St. Nicholas, Paris. Ambrine is a proprietary preparation which has been on the French market for years. It is a secret nostrum in that the proportions of the ingredients—"wax, paraffin and resin"—are not given. There is nothing original in an application of melted resin, beeswax and paraffin, although the correspondent of the Outlook seems to have been carried away with the idea that it is one of the great miracles of the day. (Jour. A. M. A., August 12, 1916, p. 535).

Aspirin.—The patent on aspirin will expire next year. The Bayer Company, the American agents, view with disfavor the prospect of losing the right to the sole manufacture of acetylsalicylic acid. This may explain the campaign of publicity which the Bayer Company has inaugurated in the lay press in which the public is urged to buy the Bayer brand of acetylsalicylic acid (aspirin) only. There can be no better time than the present for the medical profession to substitute for the non-descriptive name "aspirin" the descriptive and correct name acetylsalicylic acid. (Jour. A. M. A. August 12, 1916 p. 515).

A Study of "Uterine" Drugs.—Dr. J. D. Pilcher, W. R. Delzell and G. E. Burman, working in Pharmacologic Laboratory of the University of Nebraska Medical School, have studied the action on the excised guinea pig uterus of a number of drugs which are constituents of proprietary and "patent" "female" remedies, drugs for the value of which there is little evidence and which would have fallen into disuse but for their exploitation. The following drugs lessened the amplitude of the contractions of the uterine strips, or in stronger solutions caused a complete cessation: Unicorn root, pulsatilla, Jamaica dogwood and figwort. Somewhat less active were valerian and lady's-slipper. The drugs having very weak actions were wild yam, life root and skull-cap. Blue cohosh was most active and put uterine strips in a state of tonic contraction or tetanus. The following drugs were quite inactive: black haw, dramp bark, squaw vine, chestnut bark, false unicorn, passion flower, blessed thistle, St. Mary's thistle and motherwort. The authors are confident that the actions observed would also be produced in the intact human uterus provided the drug reached the uterus in a similar concentration but that it is improbable that the concentration of drug used could ever be attained in the body. Work which is under way indicates that these drugs do not act specifically on the uterus but on smooth muscle in general and that this general action would overbalance any favorable action on the uterus. The authors conclude that the drugs examined are practically worthless and that their use is harmful as well as futile since such use tends to perpetuate therapeutic fallacies. (Jour. A. M. A. August 12, 1916, p. 490).

Olio-Phlogosis.—The Council of Pharmacy and Chemistry reports that Olio-Phlogosis (The Mystic Chemical Co., Kansas City, Mo.) is not eligible for admission to New and Non-Official Remedies. Olio-Phlogosis is to be applied externally by means of a cotton pad for pneumonia, bronchitis, pleurisy, etc. According to information sent to the Council it consists of glycerine to which has been added small amounts of essential oils iodine, resorcinol, boric acid, quinine bisulphate and sodium thio-sulphate. The Council concluded that the claims for Olio-Phlogosis are unwarranted, that its composition is complex and irrational and that the non-descriptive and therapeutically suggestive name is likely to lead to uncritical use. (Jour. A. M. A. August 19, 1916, p. 631).

Novocain.—Novocain was introduced about twelve years ago with the claim that it was from one-sixth to one-tenth as toxic as cocain. Hatcher and Eggleston have recently shown that the toxicity of cocain varies widely with different individuals and with the rate of its absorption into the circulation, and that novocain shows far greater variations. The authors are of the opinion that novocain has a distinct field of usefulness, but call attention to the fact that death has followed the clinical use of small doses and that toxic symptoms have been reported by numerous observers. (Jour. A. M. A. August 26, 1916, p. 685).

NEW BOOKS

In this department publications sent *THE JOURNAL* will be acknowledged as they are received. Reviews of new publications will be made only as space and time permit. Publishers are requested to bear this in mind in forwarding books, etc., for review.

Practical Medicine, Series 1916, Volume III, Eye, Ear, Nose and Throat. The Eye, by Casey A. Wood, M. D. The Ear, by Albert H. Andrews, M. D. The Nose and Throat, by George E. Scham-
baugh, M. D., Chicago. Illustrated, cloth, 376 pages. Prices \$1.50. The Year Book Publishers,
Chicago.

International Clinics, Volume I, Twenty-Sixth Series, 1916. Edited by H. R. M. Landis, M.
D., Philadelphia, with the collaboration of many American and European Authorities. Illustrated,
cloth, 311 pages. J. B. Lippincott Company, Philadelphia and London.

A neat suggestion is brought to us on the technic of cancer removal in a short illustrated article
by Dr. Geo. M. Dorrance, who, after removal of growth desiccates thoroughly the surrounding tissue
by electricity, applying the idea suggested by Percy. He states the application is especially useful
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Dysthyroidism, an Analysis of Fifty Cases by John M. Swan; Milk and Dairy Inspection in
Cincinnati by J. H. Landis, Health Officer, etc., of Cincinnati, and many other good contributions
go to make this a valuable number.

The Art of Anaesthesia, by Paluel J. Flagg, M. D., Lecturer in Anaesthesia, Fordham Univer-
sity Medical School, Anaesthetist to Roosevelt Hospital; Instructor in Anaesthesia to Bellevue and
Allied Hospitals, Fordham Division; Consulting Anesthetist to St. Joseph's Hospital, Yonkers, N. Y.
Formerly Anaesthetist to the Woman's Hospital, New York City. 136 Illustrations, cloth, price \$3.00.
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In this book anaesthesia is described as the student actually finds it without the textbook ring
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plete; chapter II gives a detailed consideration of: 1st, induction; 2nd, maintenance; 3rd, recovery
and the succeeding chapter is devoted to the signs of anaesthesia: 1st, respiration; 2nd, color of skin;
3rd, muscular system; 4th, eye; 5th, pulse. Chapters IV-IX describe general consideration of ether
anaesthesia: 1st, oral insufflation; 2nd, intrapharyngeal; 3rd, intra-tracheal; 4th, oil ether rectal, 5th,
intra-venous, Ethyl Chloride, Chloroform, Nitrous Oxid, Oxygen, Ether, and the technic of adminis-
tration of each he gives in the order named.

The second part considers local anaesthesia thoroughly in all phases. The third, chapters
XII-XIII, describes mixed anaesthesia, general consideration and methods of administration.

Part two deals with the factors incidental to the actual administration of the anaesthetic includ-
ing preliminary medication, post-operative treatment of the patient, the duties of the nurse before,
during and after anaesthesia. Carbon dioxide and re-breathing, emergency anaesthesia, the anesthet-
ist records, and the use of aspirators. The last chapter the patients point of view is earnestly recom-
mended to the conscientious anesthetist and surgeon.

This book as a whole deserves the highest consideration from the surgeon, the experienced anes-
thetist as well as the novice. Fryer.

Medical and Surgical Reports of the Protestant Episcopal Church Hospital, Philadelphia.
Volume 3, 1915, Philadelphia, Preston J. Dorman. A contribution to medical advance issued through
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ENDOMETRITIS.*

LEILA E. ANDREWS, M. D., Oklahoma City, Okla.

In this paper I wish to confine myself merely to the consideration of the uterine mucosa, and to exclude all conditions arising from the puerperium.

Let us review briefly the histology of the uterus—for it is with this knowledge that we can understand the reasons why this mucus membrane is of such vital importance in the study of pelvic inflammations, and we can also better understand why we not only fail to help, but also often hinder nature in protecting herself against bacterial invasion.

The myometrium is formed chiefly of plain muscle fibre, having a serous peritoneal covering over the most of its surface. The mucosa, or endometrium, consists of the columnar variety of epithelium prolonged into muscle as an abundant series of simple glandular acini. These glands are more abundant in the cervical portion. There is no sharply defined sub-mucosa, but immediately underlying the epithelium is a reticulated stroma characterized by a relatively abundant accumulation of cells—so abundant as to be frequently mistaken for inflammatory infiltration. The inner layer of the myometrium is very richly vascular and there are, further, abundant lymphatics—those of the body communicating with the lumbar and those of the cervix communicating with the iliac lymph nodes.

We have, then, an epithelium that allows easy extension of infection, and at the same time a wonderful line of defense in the underlying vascular and lymphatic structures. Classifications of endometritis are only arbitrary at best—we shall therefore think of two great classes, the non-infectious and the infectious, bearing in mind that the degree of any type varies as the causative agent and as to the resistance offered. This smaller class of the cases, the non-infectious, and yet a class commonly seen, embraces: (1) The types resulting from anaemia, from any of the many causes; (2) from the presence of new growths; (3) from passive congestion resulting from any of the displacements. There is present in all these types evidence of varying degrees of disturbance of the endometrium and its adjacent muscular tissues—engorgement, serous and cellular infiltration into the tissues, and hyperplasia of the tissue elements in varying proportions. The glands increase in numbers and also in length and there may be hyperplasia of the stroma cells—the surface of the endometrium becomes irregularly involved, giving it a rough, uneven, mottled, nodular, or even fungous appearance. With the gland ducts swollen and obstructed we may consequently have small cysts.

All these types have as the most natural symptom—hemorrhage. This

*Read in Surgical Section, Oklahoma State Medical Association, Oklahoma City, May 10, 1916.

either takes on the form of metrorrhagia-menorrhagia or of irregular bleeding coming under no particular classification. The diagnosis is dependent on the clinical history and the physical examination. Where is there a greater field for the laboratory to do nice work, than in just this class of cases? The patients are usually young women and frequently the menstrual habit has not been many years established—the blood count—the Wasserman—the t. b. c. fixation—can as a rule reveal to us accurate causes of anaemia. Likewise the examination of the stools can throw light on the cause of anaemia by showing parasites, blood, etc. The urine, that wonderful index to the real patient, can help us in unraveling many stories of pathology of the uterine mucous membrane if we only look to it for aid. Sometimes we find it necessary in differentiating from malignancy, to make a curettage, to secure scrapings for microscopic examination. This of course is the most accurate means of diagnosis, but should only be done when no other cause can be defined. The treatment should correspond with our etiology; anaemia should be accordingly treated; displacements should be corrected and growths should be treated surgically.

Now, as to the infectious type of cases.

Nature has provided for her own protection in many ways, by first making a natural division of the mucous membrane into the cervical portion, and that above the internal os, the mucous membrane of the body. Let us note here the peculiarities of the cervix: (a) the greater part has no peritoneal covering; (b) the muscular layer has a much larger proportion of connective tissue and is hence firmer; (c) there are no large venous sinuses in the cervix and the blood vessels have thicker walls and smaller lumina than those of the body; (d) the mucous membrane is disposed in prominent folds which extend obliquely outward from two ridges—one near the center of the posterior lip and one near the center of the anterior lip; (e) the glands approach the racemose variety, lined with columnar epithelium; these secrete a clear viscid tenacious mucous that fills the cervical canal and serves to close it and thus preventing invasion of the uterine cavity from below; (f) the tissue with the characteristic stroma cells is comparatively thin in the cervix, the cervix taking little part in menstruation and pregnancy, and also the atrophy of senility, proportionately, is less marked.

It is well then to regard the body and cervix of the uterus as two very distinct organs, differing as we have noted in their histologic structure, physiologic functions and in the pathologic processes that affect them.

In the infectious type, the bacterial invasion is almost always from below—in the nullipara, in the vast majority of cases, the gonococcus is the offending microorganism, it being ordinarily the only germ that will on mere contact with the mucous membrane implant itself, grow and spread upward. The involvement of the cervical mucosa may be primary. Some authorities giving as low a percentage as 10, others 30 or 40; when this is true, we frequently see no physical signs or symptoms until the whole endometrium has been attacked and the condition has reached a salpingitis. When secondary, as is the usual condition, we have a preceding vaginitis, which not only infects the tract with the gonococcus but later carries along other organisms resulting in a mixed infection. The complicated lumina of the racemose glands are then involved and by the stimulation to secretion of the mucous cells, a stream of muco-purulent material is continually poured out into the cervical canal, this producing the constant leucorrhoea which is so characteristic of the disease. Practically the whole endometrium then becomes involved, the germs lie both on the surface and penetrate into the glands and interglandular tissue. In the little folds mentioned before, we see a favorite and treacherous hiding place for the gonococcus to await an easy opportunity—at menstruation or child-birth—or any hyperaemia to light up to spreading activity. In some glands the ducts become completely closed by the infection, and still secrete, forming retention cysts.

The diagnosis depends in both the acute endometrial inflammatory and the

chronic form. 1st, upon the clinical history of the case; 2nd, the physical finding on examination; 3rd, the microscopic examination of the discharge. In the acute cases, the earlier the patients are put to bed the better opportunity they have of limiting the condition to the uterus and the prevention of a real pelvic inflammatory disease. The hot douche correctly given is desirable not because of its direct effect to the endometrium, but rather its value in the treatment of the vaginitis. A clean surface is to be desired. The douche followed by the insufflation of kaolin seems to lessen the degree and shorten the length of time of the vaginal infection. The tampon with iodine and glycerine should only be used with the greatest caution, for it often aids in the extension to the endometrium of the body by the interference with the blood supply and encroachment upon the lymphatics.

The vaccines in gonorrhoeal endometritis do not give the results as they do in other infections. Curettage is to be mentioned only to be strongly condemned, for by this treatment, many cases that have been latent, have become viciously active and the active cases have more quickly become true pelvic inflammatory disease.

In the chronic cases, most of the inflammation lingers in the glands of the cervical mucosa and there usually co-exists, a chronic vaginitis. Douches and iodine-glycerine tampons, not packed tightly into the vagina, seem to aid in shortening the course of the disease. Kaolin seems to be particularly useful after a thorough but gently cleansing with the douche.

This condition, so prevalent, deserves much more consideration than we often give it, and when we realize that, especially in our acute cases, *rest* is of vital importance, just so soon will we appreciate the value of nature's own treatment in the prevention of pelvic inflammatory disasters.

Discussion

Dr. Hirshfield, Oklahoma City: I enjoyed very much Dr. Andrews' paper on this extremely common condition—endometritis. It appeals to me chiefly from the standpoint of infectious endometritis, especially gonorrhoeal. I wish to emphatically second the Doctor's words in reference to the too often attempted efforts of the physician to cure gonorrhoeal endocervicitis or endometritis by the curet. What he thus does is to tear down nature's barriers which have been set up to prevent the upward spread of this dread infection. I refer to the internal cervical os and the normal uterine mucosa. A gonorrhoea is often limited to the cervical mucosa and will stay there if not carried upward by meddling intra-uterine instrumentation. I remember once in the first year or two I was out of college, a young woman was brought to me, presumably, infected with gonorrhoea by the husband, who had just had a slight exacerbation of a supposedly cured urethritis. Acting on the advice of a prominent gynecological author, I very zealously curetted and swabbed out this uterus in an endeavor to prevent a salpingitis. Well, gentlemen, the only thing that prevented me giving that woman a salpingitis and possibly pelvic cellulitis was that she had not been infected as thought. I would not dream of such a treatment now.

I have seen many cases in which the gonorrhoea has for years been limited to the cervical region with a possible concomitant urethritis. This is the sort of case that may suddenly, after a labor, miscarriage, or curettage, develop an acute gonorrhoeal endometritis, metritis, salpingitis and even peritonitis. On the other hand I am now treating a case, in which, in spite of the most conservative treatment, the infection spread rapidly upward to the uterus, and tubes. Though this girl is only seventeen, she is doomed to a life of sterility and possibly invalidism. What to do with these cases is a big problem. However, if we find the condition localized to the cervix, let us avoid going beyond the internal os with any instrument. I think more damage is caused by indiscriminate use of the curette than any other instrument of the surgeon.

Dr. A. L. Blesh, Oklahoma City: There are just one or two phases of Dr. Andrews' excellent paper that I want to discuss. First, the route by which infections

reach the endometrium. Aside from specific infection, as a rule, endometritis is a disease of the nulliparous uterus. Why? Primarily because here is to be found the lacerated cervixes. In the nulliparous uterus there exists two anatomical barriers against infections ascending from the vagina which is the usual source, the external and the internal os. With laceration of the external os comes cervical eversion, with eversion comes erosion, the cervical ulcer of the old authors. Why? Because normally the uterine and cervical mucosa is sterile, and bathed in an alkaline secretion. The vagina on the other hand is acid and always the habitat of various bacterial flora. Cervical erosion means contact of a surface accustomed to an alkaline medium with an acid medium, of a surface unaccustomed to bacteria with a bacterial field. Infection, erosion, ascending invasion is the sequence. Nabothian cyst degeneration is a further remove in the sequence.

As a rule, whether the tubes are also to be infected or not depends on the doctor. The curetting doctor is in my opinion only too often the direct cause of tubal invasion. This is often true of specific tubal infection as well. My case histories often show that the patient comes to the doctor complaining of a free purulent vaginal discharge, is promptly curetted, following which a few days or a week later lateral pelvic pain begins and persists. Also abortion and later labor at term in the presence of an infected vagina, often opens the way upward. These are the things which prepare the way for the surgeon only too often.

SOME PATHOLOGIC CONDITIONS OF THE THYROID GLAND.*

FRED H. CLARK, M. D., F. A. C. S., ElReno, Okla.

In considering pathologic conditions and affections of the thyroid gland, it might be well to divide them into:

First. Secondary affections, or an inflammation of the gland due usually to some disease such as typhoid fever and which may or may not produce suppuration. This class being usually designated "thyroiditis". Local or topical treatment usually suffice for these cases and they are generally spoken of by the laity, and sometimes by the profession as well, as "goitre". The fact that they are so readily cured, or in the vast majority of cases cure themselves, is no doubt accountable, in some measure at least, for the delay so often allowed before the case of "real goitre" falls into the hands of the practitioner.

This disease, while much more common among females, is frequently seen in the male also. In the young girl there may often be seen just as she is beginning her menstrual epoch the enlargement spoken of above as thyroiditis and which is undoubtedly secondary in nature and which proves a self-limiting disease.

Were this the universal rule there would be no need of further consideration of this subject here. I am reminded just here of a case in point.

Two years ago a sister of one of the young lady teachers in our high school spent the school year with her sister in our city, the younger girl being a student. I saw her a number of times and there was no sign of any enlargement of the thyroid at that time. She returned to her home at the close of the school year and a few weeks ago a letter informed her sister she was suffering with a goitre, that her condition was growing rapidly worse and that an operation was imperative. Her sister left school at once for her home in New York state, but did not arrive until after her sister's death, which either occurred on the operating table or soon after leaving it.

I speak of this case to point out the necessity for early care and treatment to secure the best results. Of course this may have been malignant, I do not know.

*Read in Surgical Section, Oklahoma State Medical Association, May 10, 1916.

Second. Primary affections. This second class of thyroid cases we will divide into: a. Simple, benign; (1) Cystic, (2) Colloid, (3) Ex-ophthalmic. b. Malignant.

The office and function of the thyroid gland, like many other glandular bodies, is not thoroughly understood but sufficient is known to prove that a normal amount of thyroid secretion is necessary to preserve the proper physical balance. Certain children in which there is a lack of development, both mental and physical, show improvement when given thyroid extract and the improvement ceases when the extract is discontinued. The excessive secretion may bring on toxic symptoms which are progressive and unless hindered will ultimately produce exhaustion and death.

Inasmuch as it is not the purpose of the author to consider the history and etiology of goitre, but rather to simply present a practicable working discussion of the subject, it might be well to simply, for ease of discussion, divide goitre under two general heads: (1) Medical or non-surgical goitre, and (2) Surgical.

Then we must consider the question, when does a case of this character cease to be a medical one and become surgical?

Under the head of the medical or non-surgical goitre come those cases of enlarged thyroid mentioned before as thyroiditis usually as the result of infections elsewhere in the body and if operable at all only for the purpose of draining an abscess which may have formed. Under this head there should also be placed the simple cystic or colloid goitre unless it has reached the stage where the excessive amount of toxins secreted is having a deleterious effect on the physical condition of the patient.

The peculiar location of thyroid, coupled with the fact that it is about the only glandular structure in that location, makes the diagnosis comparatively easy. The cystic form may be confined to one or may affect both lobes, but is more frequently unilateral. The growth is smooth round and gives the feeling of liquid to the touch. The same may also be said of the colloid variety; so long as these conditions do not destroy the activity of the gland nor cause it to become unduly active, treatment in the form of topical applications or the use of electricity or some cataphoric medical treatment is all that is required and a very large number of this class of cases will become well.

Not so with the class usually designated as exophthalmic. Earlier in this paper the author said consideration should be given to the question of when operation is indicated. In practically every case of goitre which has reached the stage where exophthalmos exists, we are having an excessive secretion from the thyroid gland which is toxic. Just what causes the bulging of the eyeballs seems not to have been determined; but no matter what the cause, a remedy is called for and to be the most effective the earlier this remedy is applied the better.

Various methods of treatment have been tried, ranging from the injection of boiling water to cataphoreses of all forms of astrigent remedies, and of late injection of iodine directly into the growth has been tried. From my own experience and observation there is but one form of treatment to be applied and that is surgical.

Removal of the greater portion of the glands wherever it is possible and where that can not be done ligation of the superior thyroid artery outside the capsule. This procedure I have never practiced as the number of cases of this character which have fallen into my hands has been limited and those who have been willing to submit to operation have been in such a condition that removal of the gland was possible.

In most of these cases, especially if they have been growing for some time, we may expect to find the patient in a very nervous condition; tachycardia will also be present sometimes to an alarming extent. Oftentimes the patient suffers severe dyspnae, due in some measure perhaps to the mechanical pressure from the growth, but even when that does not seem possible from the size of the gland the

toxic condition seems to produce the same result and oftentimes may cause much greater distress than the mechanical pressure.

It is very important that these conditions be given careful consideration and the patient required to rest for some time before operation should be attempted. Tonics should be given, the heart's condition improved and every avenue of elimination increased before submitting the patient to such a severe ordeal as the removal of the thyroid gland. If operation is undertaken it should never be attempted without a thorough knowledge of the anatomy of the region.

Care should be taken first not to sever or injure the laryngeal nerve and thus produce either a loss of the voice or injury of the same by producing an annoying hoarseness which may become permanent. While under ordinary circumstances the vagus nerve is sufficiently removed from the site of operation to be safe, yet in unusually large growths this nerve might be injured. As a rule, however, notice of this would be given by the effect it would have on the respiration, which should be sufficient warning to the operator to make him careful. During the early history of thyroid surgery two after-conditions were much dreaded; (1) myxoedema, and (2) tetanus.

It was some time before the cause for these conditions could be found. It finally, after much observation and experimentation, was generally accepted that the first condition was caused by the removal of the entire thyroid gland, which would mean both lobes and the isthmus thus causing a complete cessation of thyroid secretion; and the second condition, or tetanus, was caused by the removal of the para-thyroid bodies.

These can both be remedied by leaving the upper and outer portion of the gland, or that portion about where the superior thyroid artery enters the capsule of the gland.

The para-thyroid bodies are small bodies resembling grains of wheat in size and shape and are located in the upper and outer portion of the gland, or that portion mentioned above as being the part that should be left. In the majority of instances these bodies will not be seen during the operation, and it will only be known that they are left by leaving a portion of the thyroid gland, in the location already mentioned, attached to the capsule and about the size of a filbert.

These three precautions are perhaps the ones that are productive of the most serious results if not heeded, but as stated elsewhere the anatomy of this region should be thoroughly mastered before attempting an operation, especially if the case is one of exophthalmic goitre and of sufficient severity to produce disturbances of the heart.

Two cases are recited here as illustrative of the conditions to be met:

Case 1. G. C., age 30, government employee. About three years before patient came under my observation he began to notice an enlargement in the neck. For about one year he was under my care and during the latter portion of that time he began to show symptoms of excessive nervousness accompanied by some difficulty in breathing and protrusion of eyes. The growth was removed by a simple collar incision without any difficulty and patient made an uneventful recovery.

The specimen which is shown was the right lobe, and is of the colloid variety.

Case 2. Mrs. B., age 32, white, married, mother of six children. Early in the year 1915 she came to me complaining with an enlargement of the neck. At that time she was showing some signs of extreme nervousness and the eyes were beginning to protrude. She was obliged to work to support her three children who were living with her as her husband had left her. In June it became apparent that her nervousness was increasing, and it was also becoming hard for her to get her breath after exertion and when she was tired; the eyes were protruding more than when first seen. She was advised to stop work and go away to some friends for rest. This she did and with some little attention to her physical condition and improving it by giving tonics, she was ready for operation by October

1st, when she entered the hospital. The greater portion of both lobes were removed, taking care as mentioned in the paper to leave a small portion of each lobe and with them the para-thyroid bodies. The patient made an uneventful recovery, leaving the hospital for home on the seventh day. Since the operation her health has steadily improved and she is now able to do as much work as she formerly did.

The specimen from this patient presented is not nearly as large as that from the first patient, but the disturbance was very much greater.

Just a word should be said about the malignant thyroid, and that is, that it is of course like all other malignant conditions, and the only possible hope that can be presented is from early and complete extirpation of the glands. While not common, it, like the malignant prostate, is seen sufficiently often to make it necessary to never lose sight of the fact that we may find it at any time.

Discussion

Dr. Leigh F. Watson, Oklahoma City: Surgeons and internes agree that the best results follow the thyroid operation when it is performed before the disease has reached the more serious secondary stage—just as a smooth and comfortable recovery will follow the proper medical treatment when administered to beginning cases. If the surgeon is to operate on all favorable cases of beginning hyperthyroidism, surely much useless surgery will be done. Any one with experience in the disease cannot doubt the value of thyroidectomy as a therapeutic procedure, and in many cases it is the only treatment from which the patient may derive benefit. It is my opinion, however, that only in exceptional cases should it be the first step taken to effect a cure. The mortality is high; the recurrence is frequent; and until a greater number of patients have been cured by it, and until a longer period of time has elapsed since it came into use, there will always be the question as to whether the patient operated upon may not suffer at a later time from too little thyroid function.

Plummer, from a study of several thousand cases of hyperplastic and colloid goiter, concludes that the disturbances are due to a change in the normal function. The stimulating effect is active throughout the body, and the stimulating action is intra-cellular. These observations have been confirmed by the work of Kendall, who has isolated a crystalline substance containing sixty per cent iodine, and possessing the physiologic activities of the gland.

The treatment of toxic goiter is far from settled; few go to the extreme point of view taken by Thompson, who says one might as well resect the liver for cirrhosis, as to remove a portion of an enlarged thyroid.

DeSajous, in the seventh edition of his book on Internal Secretions, recommends the use of quinine and urea injections in exophthalmic and toxic goiter, and describes the method in detail. In addition, he suggests small doses of Fowler's Solution, cold compresses to the neck, and bromides to control irritability of higher centers. He condemns the injection of iodine and other substances which have been known to produce death.

The importance of hygienic measures has been emphasized by Dr. Clark. In my work I have found the best results to follow the injection method, if the patient is kept in bed four to six weeks.

The function of the thyroid in the adrenal system has been much neglected, both in the etiology of symptoms and in the post-operative treatment of goiter. This may, in a measure, account for the failure of ligation to afford anything but temporary relief, and the frequency of recurrence following thyroidectomy. In hyperthyroidism there is usually an hypertrophy of the parathyroid, thymus and pituitary, and an atrophy of the ovaries, adrenals and islands of Langerhans.

Dr. W. H. Livermore, Chickasha: Mr. President, Dr. Clark's and Dr. Watson's papers were both splendid. Most of these cases come to us—come to the surgeon—after the family doctor has done his all. I do not think we should encourage them to carry these patients too far and so delay a possible operation that may be neces-

sary, but just a word; in your goiters, simple or exophthalmic, in the beginning hunt for local infection. A case that has symptoms of exophthalmic goiter should have its tonsils taken out whether they look right or not—if the condition is dangerous. As far as referring to local affections on the thyroid; that is not original with me at all. I am quoting from other men as authorities, but it is a good suggestion that we look for local infection.

Dr. Grosshart, Tulsa: I enjoyed Dr. Clark's paper very much. I want to report two cases; one of a girl who had an enlarged thyroid that incurred more than a cardiac disturbance and had her tonsils removed. After removing the tonsils the symptoms are cleared up and she is now back in school. A girl 16 years of age. The other was a case of one of the teachers in our school. Her gland was very much enlarged; her pulse at the time I saw her was running at about 150; her eyes protruded. We put her under an anesthetic, which I very much hated to give, but her nervous system was such that we could not operate without it. The throat man removed her tonsils and a like condition was carried out; vaccine was given her and she has recovered from exophthalmic condition; her heart action is back to normal and the goitre has retreated back to half its size. We have not found the cause of the beginning of these tumors, but in such cases it is my opinion that they should be operated, but still under those conditions I believe we should all look after the throat, teeth and local infections.

Dr. Leeds, Chickasha: I want to say a word about foci of infection in regard to thyroid. I believe in the next five years that there will be less surgery done on the thyroid, less quinine and urea given and better general results of the entire system, if we will get our foci of infection. If we take out the tonsils and leave an infected tube, and take out the teeth and leave the tonsils, we will not get results, but follow the rule to right everything. I would not think of treating thyroid medically or surgically either without first locating the foci of infection.

Dr. Rogers, Clinton: I fully agree with the doctor in locating the foci of infection, but sometimes the condition is brought about from pure nervousness. I want to report a case that I know came from nervousness, the conditions in the home. The father was in the penitentiary, leaving his wife with the daughter. The girl after removal of the goiter was brought to the hospital; the pulse could not be counted at times, and when it could it was as high as 160. She gained 45 pounds in three months; got well and remained well. That was simply a case brought on by nervousness.

Dr. Blesh, Oklahoma City: I believe what I heard Dr. Rogers just now say is a matter of fact. The profession simply go crazy over one aspect of a subject and think it is the whole proposition. At the present time it is the foci of infection and they are trying to attribute every possible physical ailment to some disease of the mouth. No one believes more than I that these foci of infection are questions of great importance. I think it of such importance that in the hospital in every case I have given the mouth and throat a thorough inspection and even bacteriologically examined many of them.

In 40 per cent of gall bladder trouble foci of infection has been traced to the mouth and throat; but a large number of cases especially of goitre that cannot be attributed to focal infection—just such cases as my friend, Dr. Rogers, has reported. Every doctor with experience of goiters knows that toxic goitre may be the development of a single night; after some high excitement goitre appears. There may not be any goitre itself present at the time, but we will have the cardinal symptoms of hypothyreosis. Too many times it becomes permanent from that time on. Then if we are going to hunt for the foci of infection, the hour may be rapidly going by when surgery may do that patient any good at all. There is a goitre that is due strictly to high emotionalism. What are we going to do? Take out the tonsils? Yes, if they have not already been taken out, as many of them have. Until you have a better treatment than you have for goitre, I am going to take them

out surgically and still continue to have good results. I want to see the day come when you will see the reaction of one ductless gland upon another that you can substitute where substitution is necessary, but you will have to get your therapeutic gymnastics down to a final point. The only treatment we have to depend upon at this time is surgical.

Dr. Howard, Oklahoma City: Many of our cases of goitre, just as other conditions, get well under various forms of treatment and we think that perhaps the form of treatment we are applying when the case improves will apply to all cases. I was interested in the paper. However, in thinking of goitre and dealing with it, I will divide the cases in two classes, toxic and non-toxic classes. In dealing with the non-toxic class, cosmetic reasons may demand operation; pressure at times on the trachea or on the glands may demand operation, but in toxic cases I believe a good many of them demand operation, or at least some form of treatment that will give them relief. We are getting too many cases brought to us or coming to us that have passed through the toxic stage. We find them with degenerated lungs, hearts, kidneys; surgery or any other form of treatment will not do that case any good. But that same case taken at a proper time and proper treatment applied, either surgical or otherwise, would, in a great many cases, prevent that individual from passing into a stage that is hopeless. Removing the focal infection or anything else you may want to do to that case won't restore the action of the heart or the damaged kidneys, so I think you should remember that a great many of these cases are surgical cases, provided they are taken care of at the proper time.

Dr. M. Smith, Oklahoma City: Mr. President, I did not get into the room in time to hear all of Dr. Clark's paper, but what I did hear I enjoyed. I gather from what the discussion has been on the paper and from what I have heard that it seems that the contentions are hinging on auto-infection or foci of infection. I was gratified indeed to hear some of the members who discussed the paper take issue with that point. I remember reading about three years ago an able paper written by a man in Baltimore on the "Massacre of Tonsils". Mr. President, I think, as well as all other men, that the pendulum is swinging too far and I was indeed gratified to hear some of the doctors discussing the paper mention that fact. We are going absolutely crazy on a few things and we forget the essential elements that are backing it up. I do not believe that every tonsil ought to be taken out. I believe in surgery, but I think we are going too far. I believe that if the tonsil is diseased and the patient is past the age of puberty that it should be taken out, and if it is diseased before that time it should be taken out, but to go down and remove the tonsils for everything that happens, I think it is wrong. You are taking out a gland, you do not know what the function of that gland is, and it is evident that that gland has a function to perform or it would not be there. I think it is wrong to take it out on the suspicion that it must be taken out on account of a disease. The point I want to make is, every thyroid case is not a surgical case. I think that some distinction should be made in the operation of our thyroid cases. I have had cases that have been referred to me for surgical work and have put the patients on some constitutional treatment to take the gland down and the patients have gotten well without surgery.

Dr. Clark, closing: I have very little issue to take with any of the doctors discussing the paper. Some came in late and did not hear all of the paper. The question of gland I spoke of as thyroid, which is a common low grade infection of the gland and which is apparently toxic. Toxic, but in a milder form. I said to you in the early part of the paper that you cannot consider a thing like goitre in the short space of five or ten minutes. Goitre is a subject to spend all afternoon on and then just get started nicely. I tried in writing this paper to make a little practical resume on this subject to bring these things to our attention again.

I cannot make myself believe that focal infection is the main cause of the severe form of thyroid enlargement and trouble we find. I think we are apt to follow—I don't mean this in any disrespectful way—fads. We get to thinking on

a certain line and stay on that line. I don't think that the cases of exophthalmic goitre I have seen will ever get much better with focal infection. I had the pleasure of listening to a gentleman in Arkansas sometime ago who never operated on appendicitis; that man was conscientious; I never heard a man who was more sincere. The point I want to make is this; he had followed a given line and everything pointed toward that one point. We must not allow ourselves to get some one certain thing in mind and imagine every disease of the body is going to come from that. If we do, we will get into trouble. High emotionalism or shock has been brought out as an opinion. I still want to insist that we get at these early. The delayed cases come into the hand of the surgeon and cause a high death rate. The shorter the time after the onset of the disease before it is brought to the surgeon or to the diagnostician for a careful diagnosis, the better the results we shall have.

PROCIDENTIA

W. E. DICKEN, M. D., F. A. C. S., Oklahoma City, Okla.

Much of the history of gynecology up to the present time has been described by Playfair as a result of "crazes".

First of all came the uterine displacement craze, when Graily Hewitt of England, Valpeau of France, and Hodges in America, championed the cause of the pessary for the treatment of backache or pelvic pain, and every gynecologist felt himself called upon to invent one, or to modify some one else's; the unfortunate uterus all the while being, as Allbutt says, either "impaled on a stem or perched on a twig."

In 1857, Gustave Bernutz had the pelvic cellulitis craze, when he found the cause to be peri-uterine abscess, due to inflammation of the pelvic cellular tissue. Then the famous memoir on pelvic cellulitis by Bernutz and Gaupie was published.

This view of pathology was largely accepted until 1880 when Gaillard Thomas showed that much of the alleged cellulitis is real peritonitis and that it was rare in virgins.

In like manner oophorectomy, cliteredectomy, inflammation of the os and cervix uteri, excision of the uterus and its appendages, operation for extra-uterine pregnancy and cesarean section, all had their day, according to the dictations of fashion.

Now the time has come for us to decide the best method for the relief of procidentia. In order to have a downward displacement uteri of any considerable degree, a backward displacement must precede. The degree may vary from a trifling descent of all the structures in the pelvic canal, including the uterus, to the complete extrusion of the organ from the body.

The uterus in its descent is usually accompanied by the bladder and the anterior wall of the rectum, which undergo stretching, the walls of the vagina are also stretched, as are connective tissues and the fascial supports of the pelvic floor.

In the greatest degree of downward displacement known as procidentia uteri, very elaborate changes of structure and of anatomical relations have taken place and cases vary greatly in the individual changes of relations, which have occurred. Sometimes we have the uterus escaping from the pelvic outlet, without any changes in the size or shape of the uterus or its cervical segment.

In rare cases the protruding mass forms a true hernia; consisting of a portion of the bladder, vaginal wall and urethra, the lower portion of the broad ligament, part of the tubes, several inches of the rectal wall, ovaries, with some small intestines or omentum. More often, however, we only have a protruding mass of bladder and rectum, together with the tubes and ovaries, following, the uterus which is hypertrophied with an elongated cervix, with great increase of size and

weight of the uterus, with a canal measuring from six to eight inches in length and the cervical segment may be two or three inches in breadth. This brings about decomposition of residual urine and secondary bladder or kidney changes. Defecation is more or less interfered with and frequently requires manual assistance; impairment of the rectal flow of blood favors the development of hemorrhoidal conditions and other disorders of the rectum.

Notwithstanding all of this pathology, patients, especially working women of the phlegmatic type, will complain of very little discomfort and many women will support the parts with a tight napkin and perform heavy manual labor, refusing operative relief.

In my experience I have been unable to find any form of instrument or apparatus, which would support the parts for any length of time without irritation or ulceration from direct pressure. It appears impossible to me to secure in the greatly widened and straightened pelvic outlet, a proper point of support for any instrument.

The operative relief of downward displacement has received much study and many procedures on protracted trial proved unsatisfactory. Removal of uterus does not restore the accompanying displacement of the bladder, rectum and vagina; and there are also numerous objections, which are too obvious to mention, against uteri fixation and suspension or shortening of the round ligaments, or utero sacral ligaments, so let us discuss an operation with the least objectional feature, striving all the while for perfection.

Vaginal celiotomy, with all its plastic work attached, affords, in my opinion, an avenue whereby perfection can be attained in this class of cases, with the least amount of mortality and the best support. I do not think I can at this time add much to the work of Mackenrodt or Duhressen, who worked along similar lines in 1892, but in the main we are carrying out their theory.

Vaginal fixation of the uterus today may be done as follows: An attempt is made to overcome the relaxation of the anterior attachments of the uterus and to attach the overstretched vagina, to a higher point on the anterior surface of the uterus and to overcome the downward displacement of the bladder. Vaginal fixation attaches the uterus so closely to the anterior vaginal wall, that union is and should be a most firm and unyielding one; hence, in that event pregnancy should not be permitted.

It is fortunate, indeed, that a large proportion of cases, patients upon whom this operation is done, are beyond the child-bearing period. If it should be discussed proper to do this operation upon cases under the child-bearing period, pregnancy may in this event be overcome by the simple steps of resecting the tubes, at the cornu of the uterus, and stitching the cornu over. This step in no wise interferes with menstruation and does not induce an artificial menopause. The operation is especially fitted for women at or past the menopause.

The operation is commenced by holding the uterus down and firm by teneclum, and making a transverse incision (as in all cases of anterior vaginal celiotomy) across the anterior wall of the cervix just below the lower border of the bladder, the upper lip of the incision is lifted up with aid of two pairs of blunt artery forceps and the index finger covered with gauze; the bladder is thoroughly separated from its attachment to the anterior wall of the cervix and from the uterus to the vesico uterine fold of the peritoneum. Now a longitudinal incision is made, beginning at the middle of the transverse incision and extending up to within a half inch of the urethra; a long pair of sharp pointed scissors are best used here and the lower blade is introduced between the vaginal mucosa and the bladder; by successive snips the incision is extended to any desired length.

With again covering the index finger, the bladder is stripped back under the pubic arch and two very large flaps result from the complete separation of its attachments to the anterior vaginal wall; fifteen or twenty minutes may be well spent to keep from tearing the vaginal flaps, or leaving islands of vaginal mucosa

behind. After the bladder has been thoroughly separated, an anterior vaginal speculum is introduced underneath the bladder, and the bladder is lifted up out of the way and pushed back of the symphysis. At this time the vesico uterine fold of peritoneum is seen and a transverse incision is made, running full width of the uterus; the anterior vaginal speculum is now placed through the incision, into the peritoneal cavity, and the bladder is again lifted up out of the way, and placed behind the symphysis; with the anterior wall of the uterus now seen, a tenaculum forceps is applied to the fundus uteri, and the body of the uterus is pulled through this opening in the peritoneum, the cervix being at the same time pushed back over the surface of the posterior speculum into the vagina.

Figures three, four, and five show four fixation sutures of chromic cat-gut, which are to unite the anterior wall of the uterus to the anterior vaginal wall. These sutures are left long and secured by artery forceps until the cervix has been amputated, which should be done in a large majority of cases.

Figures seven, eight and nine show amputation of the cervix carried on at the level of the internal os. The cervical canal is then dilated after the anterior lips have been grasped with vulsellum forceps, and the vaginal mucosa is then united about the internal os, chromic cat-gut sutures No. 2 are passed through the cervical canal, through the entire wall of the cervix, and out through the vaginal mucosa.

The vaginal flaps are now resected from the redundant tissue and our four sutures which penetrate the fundus uteri are tied, which has a tendency to pull the uterus and hold it in a more elevated and nearly horizontal position: giving to the bladder a most comfortable bed to rest upon. Figures ten and eleven will illustrate this step.

Figures twelve, thirteen, fourteen, fifteen and sixteen show, to a glance, our method of repairing the relaxed and torn perineum. The only step which we think important in our technic aside from bringing the muscles together, is the use of No. 4 chromic cat-gut sutures passed in the Waldo figure of eight fashion as a stitch.

Conclusion: Vaginal fixation is indicated in all cases with procidentia having a non-malignant uterus, with cystocele, rectocele, and relaxed vaginal wall in women past the climatic period. The support is best that could be given the bladder, by any other means, with as nearly a normal out-let as could be obtained.

With the ten cases we have done during the past five years, we have had no complaint following the operation and our patients all made an uneventful recovery.

The contra-indications are those cases where the anterior vaginal walls are congenitally short and in women of the child-bearing period of life.

STILLBIRTHS

In a preliminary report on the bacteriologic study of the causes of some stillbirths, J. B. De Lee, Chicago (*Journal A. M. A.*, July 29, 1916), reports briefly the findings in three cases. One case seen thirteen years ago was that of healthy mother delivered of a child born with a temperature of 101, which in a few hours rose to 103. The child died of streptococcus septicemia, the mother showing no signs of infection. A year later a physician's wife, after a mild pharyngitis, developed albuminuria and eclampsia. Artificial delivery was performed and pure pus, in which was found the pneumococcus, exuded from the child's nostrils. The three cases here reported, and which indicate to De Lee that the child can become ill independently of its mother and even die without her being affected directly or without any disease at all, are one in which a macerated fetus was delivered, from the organs of which a pure culture of *Streptococcus viridans* was obtained, and in the other two there was a similar condition of the fetus, with streptococci and pneumococci, respectively. De Lee is convinced that this finding opens up a new field and may reveal the causes of many peculiar diseases in pregnancy.

THE DANGER SIGNALS DUE TO THE APPROACH OF THE MENOPAUSE*

W. G. BISBEE, M. D., Chandler, Oklahoma

In choosing this title for a paper to be read before you, I am not expecting to bring forth any new, startling, or original ideas on this every day class of cases which are brought to our notice, but rather to bring before your minds the importance of careful study and observation of them, and to appeal to you for a more intelligent treatment of these women who come to you for relief from their varying symptoms.

The cessation of the menses is an incident in the grand climacteric which comes to both man and woman, but which comes to woman earlier, as a penalty for her earlier development, and more fortunately for man, who grows old by merciful and gentle gradations, sliding half unconsciously into the afternoon of life, with slight regrets, taking twenty years to accomplish the changes which occur in woman in two or three. Small wonder, then, that because of the changes which are so abrupt in woman, she frequently experiences severe physical and mental changes, which are sometimes disastrous to her health and happiness.

There is no mystery as to its causes, for when the genitalia have reached an age of approximately half a century, senile changes are to be expected. When we consider the profound changes in the hair, skin, arteries, glandular structures, etc., at this time of life, we are prepared to admit that the ovaries may become fibrous and the uterus may undergo atrophic changes which are truly senile.

Some very competent observers in the past and present have advanced the theory that the ovarian secretion, and the hypothetical substances therein contained, being lacking at the menopause, gives rise to the symptoms of the climacteric, yet it should be remembered that there are thousands of women who have passed this period, either naturally or induced by operation, and yet live in normal health. This fact proves to my mind that the menopause in itself is not a pathological process.

In many cases, the deposits of fat at the age of menopause is a serious burden, especially when it is deposited about the heart, in the pericardium, and the sub-pericardial connective tissue. This condition gives rise to the more serious symptoms of hurried respiration, cardiac asthma, palpitations and venous stasis. About 10 per cent of all women suffer from the so-called hot flashes, which is caused by a temporary vaso-motor paralysis, which permits the extreme dilatation of the small vessels.

Metrorrhagia has no place in the normal phenomena of the menopause, and right here we can do so much to correct the popular fallacy which exists amongst the laity, even the more intelligent classes of whom do not realize the danger of this symptom, and many practitioners are guilty of neglect of duty by explaining this symptom as only one of the normal symptoms of the climacteric.

In an analysis of over 2000 non-malignant cases of profuse menstruation, of all ages, it has been shown that this is a condition which belongs to the early period of menstrual life, and in over 80 per cent this condition occurred between the ages of 20 and 40. It is at the menopause that the inhibition and vital resistance of the tissues fails, and the lurking malignant disease advances most rapidly. Any metrorrhagia at this period is suspicious of malignancy, and even a serous discharge from the uterus is often a warning of cancer.

With the atrophy of the hypogastric plexus comes the disturbances of the sympathetic nervous system, though a disturbance of the stomach and bowels is by no means pathognomonic of this condition. The heart is more frequently disturbed at this time than any other organ. Tachycardia being often the earliest symptom of the menopause, and it is a noticeable fact that tachycardia is most likely to afflict those who experience menopause early in life.

*Read in Surgical Section, Oklahoma State Medical Association, May 10, 1916.

Few cases come to autopsy, but it has been demonstrated that the tachycardia belongs to the type of cases in which there is early shriveling of the ovaries, hyperplasia of the connective tissue. Tachycardia should be carefully distinguished by the full, strong, and regular pulse, irritable disposition, throbbing aorta, and a high percentage of hemoglobin, from the weak heart, announced by the fluttering and easily compressible pulse, and low hemoglobin percentage, which accompanies this condition.

Glycosuria is occasionally present in the years of the menopause, but the prognosis is not as grave as at other periods of life, for it is probably produced by irritation of the sympathetic nerve supply to the liver and pancreas, and usually yields after the irritation of the nerve centers is passed. The danger signal in these cases is the vulvar pruritis, and this symptom should put us on our guard.

Aside from the most serious danger signal of metrorrhagia in the approach of the menopause, is the prevailing tendency of most physicians to pay too much attention to the physical condition and too little to the mental changes which come to every woman in this period of life.

Occasionally we see in these cases a curious mental exaltation which causes the patient to attempt things which are impossible, and to assay tasks and reforms which are unreasonable. Far more frequently, however, the mental condition is marked by depression. Melancholia, hypochondria, and the passive forms of hysteria are often observed, and even the more active forms of insanity are not excluded. At this period may appear the active moral perversions, strong irresponsible impulses, delirium and acute manias. But of all these serious symptoms, it may be said that the ultimate prognosis is good, except in those cases showing too many neurotic defects in the family history.

On a close study of these mental conditions, it may be discovered that it is merely an exposure of the habits and mental conditions, which, through the best years of the patient's life were suppressed and inhibited. In some patients appears a childlike pliability and trustfulness, in others the more disagreeable childish traits are noticed. The patient who was formerly neat and tidy now appears slovenly in her house and person, some becoming absolutely frivolous in their conversation and behavior. Addiction to alcohol and other habit forming drugs sometimes becomes more pronounced at this time through the loss of the more orderly inhibition.

It is a curious fact, and most fortunate, that many of these cases, having fallen into this advanced senility, will work out of it again, and go through many useful years of later life, sane and serene, for we must remember that approximately one-third of her adult life is before her, in which she may round out a well spent career.

Again, in comparison with the climacteric period in man, we will add the thought that what is simply an evolution for him is often, indeed, a revolution for her. She is forced to pass in a relatively short time from her period of conquest, and surrender, from the joys and thrills of motherhood, and the ability to charm by her youth and sex itself, to the condition of merely an intellectual companion and sexless helpmate to her husband.

It is no wonder then that this sudden violence done her pride and hope, that the woman at her climacteric, finding such a sharp boundary to her former life, beyond which she must walk into a gray and passionless old age, should be the victim of sadness and drift into melancholia.

The explanation of the psychoses and neuroses of the menopause is not to be sought in absolute senility, nor in the accumulation of menstrual poisons, nor the lack of the internal secretion of the ovary, as much as in the suddenly changed mental atmosphere which we have just described.

As to treatment of normal uncomplicated menopause, there is none, but since it is a period of nervous depression, and a time of life when the vital resistance is on

the decline, latent diseases and defects which have been hitherto suppressed now assert themselves.

The gouty or uric acid diathesis may demand treatment by elimination and regulated diet. A syphilitic condition may light up, even if the original infection had been forgotten for years.

Perineal and cervical lacerations, hemorrhoids or varices may need surgical measures, climacteric fat may be such a burden that the diet may profitably be restricted, drinks must be limited, and baths and exercises prescribed.

Circulatory disturbances are chiefly affections showing stimulation of the accelerators. Digitalis is a much abused drug in these conditions, veratrum viride is more indicated, when you have a sound heart to deal with. The heart is not involved in the curious flushes and subjective flashes of heat. Bromides may yield good results if carefully used with due regard to their depressing effects.

Insomnia is a very troublesome symptom at this time of life, and demands careful treatment. Here the value of good advice along the lines of mental suggestion, open air life, proper diet, exercises, and moderate fatigue at bedtime, and the very occasional use of hypnotics, in emergencies only, are permissible. It is a good suggestion to ascribe each sound night's rest to the result of proper exercises, etc., than to permit the patient to know the name of the remedial agent which is really responsible.

Some classes of patients need high feeding and rest and quiet, especially those women who have been required to work excessively, and on the other hand, many are in danger of grave psychoses because they have nothing to do.

Tachycardia, mild or severe, will usually yield, when the ovaries lose their nerve elements, and their irritation of the sympathetic system cease.

Try and study your cases, and remember that the more completely you grasp the varying factors of her nervous disorder, and apply the treatment that suggests itself by this analysis, the more successful you will be.

THE INJURY OF TOBACCO

(Extracts from an article by Charles B. Towns in the *Century Magazine*.)

When tobacco was first introduced into Europe the use of it was everywhere regarded as an injurious habit, and on that account for awhile it made slow progress. It is no less injurious now than it ever was,—we have simply grown used to it,—and it was only when people became used to its injuriousness that the habit began to make great strides.

The time is already at hand when smokers will be barred out of positions which demand quick thought and action.

Though tobacco will injure a boy more than a man, it will also injure the man at any time during his life.

The action of any narcotic is to break down the sense of moral responsibility. If a father finds that his boy is fibbing to him, is difficult to manage, or does not wish to work, he will generally find the boy is smoking cigarettes.

Let it always be remembered that if a man smokes and inhales tobacco excessively he is narcotizing himself more than when he smokes opium moderately.

Tobacco is an unfavorable factor which predisposes to worse habits. A boy always starts smoking before he starts drinking. Cigarettes, drink, opium, is the logical and regular series.

It is very significant that in dealing with alcoholism no real reform can be expected if the patient does not give up tobacco.

PARENTAL CARE—ITS RELATION TO THE CONSERVATION OF MOTHER AND CHILD

W. A. FOWLER, M. D., Oklahoma City, Okla.

Over seventy years ago the gifted Oliver Wendell Holmes, referring to what he called "irreparable errors and wrongs" in obstetric practice uttered these words:

"No tongue can tell the heart-breaking calamity they have caused; they have closed the eyes just opened upon a new world of love and happiness; they have bowed the strength of manhood into the dust; they have cast the helplessness of infancy into the stranger's arms, or bequeathed it, with less cruelty, the death of its dying parent. There is no tongue deep enough for regret, and no voice loud enough for warning."

This eloquent argument of Holmes' fell upon deaf ears as might have been expected at that time. And yet we have but to review a few facts to realize that we today, after striving all these years after better things in medical practice, and after such wonderful accomplishments in this direction, need to have this masterful indictment of Holmes burned into our conscience until we are either shamed or inspired to a more careful consideration and treatment of our obstetric patients.

The maternal mortality incident to pregnancy and labor is 1-2 per cent; the fetal mortality is approximately 7 per cent. Reed-Mendenhall,¹ in connection with the University Extension work in Wisconsin, says that deaths from birth injuries, malformations, and prematurity are a third greater in the country districts than in the cities, while the number of still births from neglected pregnancy is easily doubled in the country as compared with cities. But the question of mortality is not all. Thousands of women are yearly being invalidated and babies handicapped with a subnormal physique from preventable causes. Our aim should be to attain, in as nearly every case as possible, the ideal "A strong and healthy mother of a strong and healthy child." Every case of pregnancy should be treated therefore, in the light of the high average mortality and morbidity in these cases. Every pregnant patient deserves, as early as possible, a complete history and physical examination and instruction as to the care of pregnancy.

General Instructions to Patients. Instructions should preferably be written or printed. Certainly they should be definite as to details. In these instructions the following points should be emphasized:

1. She should take plenty of exercise in the open air every day, but should stop short of fatigue. Walking is the best form of exercise. Heavy work should be avoided.

2. Her diet should be plain and wholesome and taken only at regular intervals. Meats, salty foods, greasy foods, and acids should be generally avoided. She should drink at least two quarts of liquids every day.

3. The bowels should move well, certainly once a day. Two movements daily are better.

4. She should consult the doctor at least once a month to have the urine examined and the blood-pressure taken. She should return at once in case of *any unusual pain, headache, oedema, vertigo, or constipation, or if she does not feel the child move.*

5. In case of hemorrhage she should go to bed and have the doctor called at once.

6. In case of painful uterine contractions before term she should lie down and, unless relief follows, have the doctor called.

7. Sexual intercourse should be avoided during the last month.

8. If the nipples are flat, cracked, or inverted they should be annointed each night with a mild antiseptic ointment and drawn out with the fingers so that she will be more likely to be able to nurse her baby,

Special Points for Consideration in Prenatal Care: Prematurity.—Prematurity is one of the most frequent causes, if not the most frequent cause, of fetal death. In an analysis by Williams² of 705 deaths in 10,000 births at John Hopkins hospital, 334 or over 47 per cent, were premature births, although other conditions were deemed to be the cause in all but 7.1 per cent of deaths. In over 34 per cent of fetal deaths in Oklahoma City³ in 1915, prematurity was assigned as the cause. Wall⁴ states that in Washington, D. C., 31.54 per thousand births died from prematurity, exceeding every other cause of death in the first year. In addition to syphilis as a frequent cause, premature labor is due to extensive lacerations of the cervix, lack of proper rest, heavy lifting, and sexual intercourse, the last three particularly, about the menstrual period. Treatment of syphilis or of extensive lacerations of the cervix, instruction of the patient to avoid the other causes, and the treatment of painful uterine contractions during pregnancy by rest in bed and morphine as immediate measures and uterine sedatives over a longer period of time should prevent most cases of prematurity with the resulting high mortality and the still greater number of children handicapped in the very beginning by a subnormal development.

Syphilis. In the John Hopkins series referred to above, Williams² found syphilis to be the cause in 26.4 per cent of fetal deaths. An early complete history and physical examination are of utmost importance in preventing this frequent cause of death. 80 per cent² of macerated fetuses and over 80 per cent⁵ of repeated abortions are syphilitic. The occurrence of one abortion or still birth should arouse our suspicion. A history of a single abortion or still birth plus symptoms of signs pointing to syphilis or of a single macerated fetus, or of repeated abortions, should be met by the Wassermann or the Noguchi test. Even a strong suspicion of syphilis should dictate active antisyphilitic treatment.

Tuberculosis. Because tuberculosis is by far the greatest single cause of death; and because the strain of pregnancy and labor are so apt to provoke marked activity with, often, resultant death in cases which, with proper care, might remain quiescent; and because practically every child⁶ exposed to open tuberculosis from infancy develops clinical tuberculosis with a mortality of 10 per cent in the first three years, unless strict prophylactic measures are taken—if tuberculosis is present its detection and treatment are of great importance. This is but another reason for an early complete history and physical examination in every case of pregnancy. In regard to both syphilis and tuberculosis, both parents should, of course, receive attention.

Toxemic Conditions. At our first examination of the patient, we should impress upon her the importance of her coming to the office at frequent regular intervals for examination of the urine and estimation of the blood pressure, and of her coming to the office at once in case of constipation, headache, more than slight and infrequent nausea, oedema, or vertigo. If we are looking diligently for these danger signals we can discover practically every case of toxemia while it is a mild toxemia and amenable to conservative treatment. Vigorous treatment of these early symptoms will make the cases of pernicious vomiting and eclampsia almost disappear from our practice in cases in which we have an opportunity to supervise the pregnancy properly. The severer symptoms should be treated by rest in bed, milk diet, purgation, and bromides if necessary for rest and quiet.

Dystocia. It is in the abnormalities of labor that we see some of the greatest tragedies in medicine. We frequently see the mother mutilated and infected beyond hope and the child lose its life by violent clumsy efforts at a delivery which a careful examination would have proved to be clearly impossible. These tragedies could largely be avoided by a careful antepartum examination made four or six weeks before the time of confinement. The object of this examination is to make a careful diagnosis of the conditions present and to select in ample time the method of procedure which offers the greatest hope of safety to both patients. The details of the antepartum examination are described in any good

text-book on obstetrics. Any mal-presentation or mal-position found should be corrected if possible. Markoe's⁷ review of 60,000 labors at the New York Lying-In Hospital shows the combined maternal and fetal mortality to be, in breech presentations over 35 per cent, in shoulder presentations over 46 per cent, in brow presentations over 41 per cent. Surely we need no other evidence of the importance of correcting these malpresentations when this can at all be done. In 269 cases of contracted pelvis in a series of 30,000 labors, Taylor reports an infant mortality of 25 per cent in cases in which the high forceps operation was done and of 46.6 per cent in cases in which version was done. In every case with a history of previous difficult labors or in the presence of a contracted pelvis, or of a mal-presentation that cannot be corrected, or of any other abnormality which indicates the likelihood of an operative delivery the patient should be given the advantage of a well-equipped hospital and of special obstetric skill if this is at all possible. With the terrific mortality in these cases staring us in the face, who will say that these patients should not have equal advantages in hospital facilities and skill with the case of appendicitis, gall bladder infection, or other major surgical conditions?

Infectious Processes. The pregnant woman is not immune to any infectious process. Any unusual pain should receive a careful search for the cause. Gonorrhea is, of course, always to be thought of and treated, if present. Pyelitis, due generally to the colon bacillus, is next most frequent. Opitz⁸ found definite pyelitis in 7½ per cent of cases. The diagnosis depends upon the presence of pain in the region of the kidney, tenderness on hammer-percussion over the kidney area, colon bacilli in the urine, acid urine, and in the severer forms, marked symptoms of toxemia and a high leucocytosis. The treatment consists of rest, milk diet, purgation, abundance of liquid, hexamethylenamine, and vaccine therapy. If the symptoms grow worse in spite of this treatment, kidney-drainage is indicated. In this and all other infectious processes induction of labor is generally not indicated but the infection alone should be treated.

Possibilities of Prenatal Case in Conservation. Baker⁹ states that no maternal deaths occurred in 500 cases under their prenatal care in New York City and that the deaths of babies under one month per thousand have been reduced about one-half. Williams² conservatively estimates that 40 percent of fetal deaths are preventible by proper prenatal care. This proportion of 7 per cent of the births in Oklahoma would mean that, in Oklahoma, every year over 1000 babies are being sacrificed to causes preventible by proper prenatal care. Add to this the host of babies with a poorer heritage and mothers dead and invalidated by lack of proper care and we may have some conception of the enormity of the guilt that rests largely upon us. No doctor should permit it to be true that his sole prenatal preparation consists in getting the name and address of the patient and the date of expected confinement and giving the information that he "will be ready." Let us heed practically the admonition of Holmes. "The woman about to become a mother, or with her newborn infant upon her bosom, should be the object of trembling care and sympathy wherever she bears her tender burden or stretches her aching limbs. God forbid that any member of the profession to which she trusts her life, doubly precious at this time, should hazard it negligently, unadvisedly, or selfishly."

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Discussion

Dr. W. W. Wells, Oklahoma City: The doctor's plea for proper management of pregnancy is a timely one and he is to be highly commended for the study and stress he has given this subject. Dr. DeLee says that pregnancy is a pathological process. We know that in at least fifty per cent of cases it is. We should make a physical obstetrical examination of the patient for the same reason that we make it in any other surgical or medical case.

I recall a case which came to me during the ninth month of pregnancy. History negative. Physical findings negative except edema and itching of the vulva. Chemical examination of the urine showed glycosuria which cleared at once when all sugars were restricted from the diet and soda bicarbonate was given in full doses. The remainder of the pregnancy and the labor was uneventful. By careful diet the mother was able to nurse her child until the tenth month.

The figures of the death toll of early infancy which he has given you are appalling and show that besides the mortality due to difficult childbirth many infants are born hopelessly handicapped for life's struggle and many more perish through ignorance and neglect. The fact to be emphasized is that there is a needless sacrifice of infants because of the neglect of pre-natal care and the early recognition of abnormal conditions. The public should be taught that the risks attending parturition can be avoided by intelligent oversight of the parturient. The skilled obstetrician will in this way place obstetrics on a plane with major surgery where it should be. Especially will he be able to recognize pelvic malformations and be able to conduct a labor in a manner conservative to both mother and child.

The doctor mentions infections as a cause of vomiting of pregnancy. Many of these young women are unsanitary in their habits. They neglect the bowels, colon B. gains entrance into the vagina, then to the uterus and appendages. We treat them with vaginal douches, colon flushings and treat the stomach by giving complete rest.

The keynote to decreasing the appalling infant mortality is Good Obstetrics and the watchword is efficiency. Efficiency in prenatal care, this means a thorough obstetrical examination as early in the pregnancy as possible; in this way the physician will be able to make a diagnosis, give prognosis and recommend treatment, so at the time of birth mother and child will be in the best possible condition. Efficiency in the conduct of labor, whether it be watchful waiting or masterly activity, in order that the child shall be assured its right to be born alive and healthy and the mother safeguarded to a happy fruition of her noblest mission in life—maternity.

Dr. A. C. Hirshfield, Oklahoma City: Mr. Chairman, Dr. Fowler's paper is certainly too good and important to pass over without discussion. I was only hoping someone else would get up and open the discussion. I don't want the members here to think that Dr. Blesh and I are doing all of the talking. I sat through some of the papers I wanted to discuss because I wanted to say something about Dr. Fowler's paper. I think it is one of the most important papers read at the whole meeting. It is estimated that 80,000 women die in this country annually of conditions incident to pregnancy and child birth. A large percent. of these are preventable and it is our duty to prevent them and our shame and disgrace if we do not. Dr. Fowler has considered the subject thoroughly and extensively. I want to mention two or three things I think are worth further consideration. He mentioned monthly urine examination, which is important. Many doctors think if they examine the urine once during the pregnancy they have done their duty. Oftentimes the doctors will tell the patient to send up a specimen of the urine and tell them "If you don't hear from me you will know it is alright. If you do, I will have something to tell you." If the urine is alright he doesn't see the patient or pay any more attention to it until he is called at confinement.

The blood pressure is also important. It has been proved that toxemia and

eclampsia can be shown as readily by blood pressure as by albumin findings in the urine. Therefore, do not depend entirely on the urine as indications of toxemia and eclampsia.

CONTAGIOUSNESS OF PUERPERAL FEVER.

S. N. STONE, M. D., Edmond, Oklahoma.

Every branch of medicine has progressed more rapidly than obstetrics. In the past, our teachers on this subject have not made the impression on the student of the importance of this branch of medicine. Hence, the young physician goes into the world thinking very little of the technic and science of this important branch of his profession.

In out-patient medical teaching, the superstition has long prevailed that the best way to teach a student obstetrics is to send him without instructions, and formerly, without instruments or apparatus, to meet the accidents and emergencies of labor. This curious fallacy exists in no other branch of medical teaching.

At present, out-patient obstetric teaching is conducted in the best schools by instructors, and often with the help of trained nurses. A man does not learn best by making mistakes, but by avoiding them, and the antiseptic habit can not be gained by seeing it practiced in hospitals, and neglecting it in out-patient service. I believe much of the contagion of puerperal fever is caused by this mistaken notion of past years, that the out-patient obstetric service should be conducted in a careless, and slipshod manner. Hence the general practitioner is not trained along antiseptic lines in obstetrics.

We know the exciting cause of puerperal fever is one of the pathogenic bacteria: most commonly, the streptococcus. How is the germ transmitted to the lying-in-chamber? First, by unsanitary conditions surrounding the lying-in-chamber. Second, by filthy and unsanitary attendance, I mean all those in the room, doctor, nurse, and assistants.

At this day and age, the doctor should instruct his patient expecting to become a mother, along the line of sanitation, in regard to herself, and the proper preparation of the room she expects to occupy during her confinement.

I am not going to take up kidney lesion, or any abnormal condition of the human body, likely to predispose puerperal fever, but stay with my text as near as possible. We should teach our patients the importance of securing our services soon, in each and every case of pregnancy, for this is the only way we can safeguard our patients against the many dangers and complications, which may arise during gestation and ultimate end.

I think we should ignore all calls to confinement cases, where we have not been previously engaged, unless in cases of emergency, and in this way the laity will soon learn to call you early in pregnancy and avoid much trouble, and at the same time be better for both physician and the patient. No more important question can engage the attention of the profession today, than the relation borne by the general practitioner of medicine to obstetrics. Many of these cases come first to him when under conditions most unfavorable without previously seeing the patient, and without warning he may be confronted by the most dangerous complication of parturition; unaided he must perform difficult operations under the pressure of necessity. Therefore, we must be ready to go at any moment to attend a case of labor, regardless of the nature of the case, or previous knowledge of same. I repeat, we are not doing ourselves, or the patient, justice when we attend cases under these conditions.

I never attend a case of labor when treating any pus case, malignant, or contagious disease, such as scarlet fever, diphtheria, erysipelas, etc., for we run a risk to our patient when we go direct from such cases to the lying-in-chamber. Another means of contamination is too frequent vaginal examinations. Great

many times we have with us a mother or some good neighbor lady, who insists that the doctor do something, get busy, for the patient will never make any progress without assistance. Consequently, if you do not know what you are doing, and pay any attention to their meddling, you will err, and subject your patient to infection.

I have not mentioned the fact, but we take it for granted, that each and every case has been made sanitary as possible, before we make an examination. We should wear sterile gloves and gown, and have our attendant sterile.

How are we to watch the progress of labor, without making frequent vaginal examinations? I know we must make examination first to diagnose our position and presentation, but after this is done, then we can watch the progress as well by rectal examination as by vaginal, thereby lessen infection, and with abdominal pressure gain much information.

The parturient suffers under the old prejudice that labor is a physiologic act, and the profession entertains the same prejudice. While as a matter of fact, obstetrics has great pathologic dignity, it is a major science, of the same rank as surgery.

Certainly, it is the intention of nature for babies to be born, and should be a normal function. Yet there is no one here who can deny that it is destructive. We all know that even natural delivery damages both mothers and babies, often and much. If child-bearing is destructive, it is pathogenic, and if it is pathogenic, it is pathologic. If the profession would realize that parturition, viewed with modern eyes, is no longer a normal function, but that it has imposing pathologic dignity, then we would prepare and treat these cases in the most modern way.

I am glad to know the medical schools are raising the standards of medical teaching all along the line. Preliminary education, thorough and complete courses in all branches, even a fifth or hospital year, are being demanded. I am heartily in favor of the hospital course, especially for obstetric training. I know we learn some things by hard knocks, and some poor patient suffers because of our inexperience, but to be proficient and to meet all emergencies in obstetric practice, we should have thorough training in gynecological surgery.

General practitioners may be divided into two classes, as regards obstetrics. The larger number are those who do obstetric work because thereby they hold the medical practice of the family. A much smaller number have natural surgical instincts, are interested in the pathology and surgery of obstetrics, and do this practice with interest and pleasure.

The latter pay strict attention to antiseptic surgery in obstetrics, and are a great boon to our profession, and lessen the mortality of puerperal fever, where the former, or first, increase the mortality, and as the midwife, they are a menace to the health of the community.

The ordinary carriers of infection are unquestionably the unclean hands, instruments, utensils, clothing, etc., which are brought in contact, during or after labor, with the genitals of the female. The zymotic diseases, such as scarlet fever and diphtheria, in the hands of a very careful person, may not enter into the cause of puerperal fever, but when in the hands of the careless, no doubt, add to the mortality. A substantial reduction in the mortality of parturient women, from puerperal septic infection, will not take place in general practice, until complicated parturition receives the same special attention now given to appendicitis and abdominal tumors. The septic mortality rates of puerperal hospitals, under the care of obstetricians, has been decreased very much, but the septic mortality of general practice has never been accurately obtained and never can be.

I appeal to the profession of this state to do this work well, or give it to some one who can. The life of the child has been lost, which might have been preserved, and whose continuation might have meant great happiness and success to the family: or the mother might have been saved, who always stands head of every

home, especially to the little ones. Why should patients demand the best skill for other complicated situations, and leave the bringing of a child into the world to the ignorant and incompetent? Is not the latter of as much importance?

As a summary, I would state that to procure good results in obstetric practice, the following should be adhered to:

1. All deliveries should be conducted on the same basis as a surgical operation, sterile drappings of the patient and proper preparation, proper cleansing of the operator's hands, and the use of sterile gown and gloves.

2. Making the smallest number of vaginal examinations.

3. By properly allowing the patient to have the test of labor and not doing meddlesome obstetrics.

4. Careful watching of character of uterine pains and strength of patient.

5. All cases showing a temperature above 99 should be regarded as suspicious, be isolated until proven otherwise.

PROSTATIC ABSCESS SECONDARY TO INFECTED HAND.

By J. H. STURGEON, A. B., M. D.

House Physician to Wesley Hospital, Oklahoma City, Okla.

Following is report of a case from the service of Dr. A. L. Blesh:

Mr. B., a man of 48 years, American, married, and a driller by occupation, gives the following history:

Family history entirely negative.

Previous to present complaint personal history is negative except for acute exanthemata in childhood, from which he made a good recovery without complications.

Present trouble dates from seven weeks ago when, while working, he received a severe blow across the left palm. The hand became swollen and painful, but he noticed no abrasion or open wound. Four or five days later pain in hand became very severe, with tenderness most marked about the region of middle of the palmar space. Two days later, one week from date of injury, he consulted his physician, who opened and drained this space through the palm, obtaining fair amount of thick, yellowish pus. Five days later a further opening and curettement of infected area was performed. The next day following, a fluctuating area presented itself just above the wrist. This was opened and drained. The hand gradually improved from this time, and at present is practically healed. Only a small drop of pus can be expressed from palm. Function of hand is practically perfect.

Nine days after the last incision, patient began to notice pain in perineal region whenever he tried to sit down. This gradually increased until pain finally became constant and he was unable to sit at all. Two days ago he began to notice difficulty in urination and applied hot applications to perineum to relieve this difficulty. Twenty-four hours before entrance to hospital, and again at time of entrance, had to be catheterized. Upon passing catheter, sensitiveness was most marked in region of posterior urethra.

Has had frequency of urination for past four or five days.

Physical examination was entirely negative except prostate, which was only slightly larger than normal, especially in region of right lobe, smooth, but extremely tender.

Urine was cloudy, specific gravity 1020, acid in reaction, no sugar, albumen large amount, no casts, large amount of pus, few red blood cells.

Urethroscope examination showed pus exuding into urethra from region of verumontanum. This material entirely obstructed the view of that portion of urethra.

Temperature and pulse were normal each morning, with a rise in temperature to 100 or 101 degrees in afternoon, with a corresponding rise in pulse rate.

Diagnosis of prostatic abscess was made by Dr. Blesh and case was operated by him in Wesley Hospital under nitrous oxide-oxygen anesthesia. Approaching prostate by perineal route, he opened into it and found the abscess cavity containing from one-and-a-half to two ounces of thick greenish-gray pus. Iodoform gauze drain was placed to base of abscess cavity.

Following operation, patient passed urine normally and without pain. No urine escapes through perineal opening.

Same organism, a staphylococcus, was obtained from pus from hand, urethra and perineal discharge.

PROCEEDINGS OF ST. ANTHONY CLINICAL SOCIETY

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Case Report by Dr. Lea A. Riely

E. S. Age 22 years, 138 pounds, school boy.

F. H. Father and mother living and well. Two brothers living and well, one older and one younger. Maternal grandmother and paternal grand father had asthma and bronchial trouble.

P. H. Born in Brooklyn, N. Y. Had bowel trouble when an infant. Usual childhood diseases. Was subject to croup when small. Was hit in upper abdomen with base ball four years ago.

October 14, 1914, to April, 1915, was taken with cough, orthopnea, cyanosis, no fever, legs pit on pressure, expectoration rather profuse; gets weak on exertion. Haemoglobin 70 per cent.

Weighed 122 1-2 pounds one year ago. Now weighs 142. Went to High School until May, 1915.

One cervical gland became enlarged and tender about one month ago.

Denies luetic infection.

P. I. About six months ago began to notice inability to lay down comfortably, legs began to pit on pressure, abdomen began to enlarge, hoarse, dry croupy cough; fills up when he eats very little; not constipated; no digestive trouble; bloats at times; no pain except when bloated or coughing.

These symptoms come on after hard physical exercise.

Reds,-----	4,250,000
Whites,-----	10,000
Haemoglobin,-----	65 per cent.
Neutrophiles-----	87
S. Lymphocytes-----	7
L. Lymphocytes-----	2
L. Mononucleas-----	1
Transitional-----	1
Eosinophiles,-----	1
Basophiles,-----	1
Poikilocytosis,-----	

Faeces: Benzidin test negative.

Urine: Slight trace albumen. No casts. Few red and white cells. Bile present.

P. E. A pale delicate boy, stands very straight and shoulders thrown back because of enlarged abdomen. Hair thin and light colored. Hairy portion of body and face very scanty. Sexual organs undeveloped. Voice always hoarse and high pitched. Eyes prominent and upper lid slightly edematous. Sclera clear, pupillary reflexes normal. Cervical lymphatics enlarged, not tender. Tonsils pharyngeal and lingual enlarged. Reddened vocal chords and under high tension, causing high pitched voice. Vision normal. Atrophic catarrah, nose and throat. Adhesions in Rosemullers fossa. Slight cyanosis of ears, lips and fingers on lying down. Normal color returning on sitting up. Diffuse bronchial rales heard on lying down and disappears on sitting up. Temp. 98 3-5; Pulse 82; Resp. 18; Sys. B. P. 105; Systolic B. P. 75.

Enlarged superficial veins below the level of twelfth dorsal with edema of tissues below. No retraction of intercostal spaces over the heart or in the back.

Sound heard at apex with first sound of heart on sitting up over an area of three inches, but disappears on lying down. Dullness over precordium of triangular area with base towards diaphragm. X-ray shows a shadow larger than normal corresponding to above. Apex beat faint and within nipple line in 5th interspace. No hemorrhoids or caput medusa. Pulmonary sounds very faint on right side, more marked on left and slight flatness of base posteriorly.

Abdomen measurements: 33 in. at umbilicus; xyphoid 35 1-2; nipple 35.

Abdomen tender to palpation, tumor non-expansile, felt in epigastrium running down on right side four fingers breadth below ribs. Symmetrically enlarged sharp smooth edges with fissure of gall bladder palpable, liver dullness superiorly to one inch below nipple. Spleen not palpable.

Lower abdomen, left flank and right epigastrium flat to percussion, right flank dull to tympanitic. Does not change on position.

Withdrew 450 C. C. amber opalescent ascitic fluid with albumin and globulin present. 700 cell per C. M. M.

Polys. 40; lymphocytes 60 per cent.

Blood and ascitic fluid both gave a positive Wasserman reaction.

There is evidently a lesion of the mitral valve, but presence of the fluid does not conduct the sounds to axilla and back, limits the extent of conduction of sound and when lying down permits heart to fall away from chest wall and obscures the sound. This can also account for the cyanosis and rales on lying down.

The presence of the symmetrically enlarged liver with dilated superficial abdominal veins without hemorrhoids or caput medusae and the ascitic and moderate edema of legs would point to a perihepatitis.

Which one of these conditions can claim priority must be determined by a further study of the case under rest in bed and therapeutic agents to tone up the heart and relieve hepatic engorgement.

But the history of the condition two years ago clearing up again and getting back in similar state on hard physical exercise, makes me believe it was primarily a heart lesion and the symptoms due to broken compensation.

Blood and ascitic fluid both show up a positive Wasserman, hence an active anti-luetic treatment must be instituted.

Summary of Cases: The condition of infantilism must be due to a congenital luetic infection owing to the positive Wasserman and in spite of the family and personal history.

The cardiac syndrome accords with the symptoms of adhesive pericarditis and the *blueness* on lying down due to pressure on pulmonary veins.

The liver syndrome are those of a cirrhosis with its polyserositis.

The term "pericarditic pseudocirrhosis of liver" or "chronic universal hepatitis" could explain the above physical findings.

Dr. Walker's Laboratory Report

Heart:—The pericardium is thickened and fibrous throughout. The parietal pericardium being adhered to the visceral and interpericardial space infiltrated with calcium deposits.

The heart is about normal in size. The muscular wall shows atrophy. Cavities: auricular, ventricular somewhat enlarged. Tricuspid valves normal. Pulmonary valves normal. Mitral valves are somewhat thickened with fibrous plaques on free surface. Aortic valves are normal.

The heart on section shows increase of fibrous tissue, atrophy and degeneration of the muscle with round cell infiltration. Blood vessel walls are thickened. No spirochaeta found special staining method.

Pleural Cavity:—Right pleural cavity contained 120 cc of straw colored fluid. Left pleural cavity contained 500 cc.

Lungs:—Right lung. Visceral pleura thickened and fibrous. Strips easily. On anterior and posterior border of lower lobe is a fibrous nodule which is apparently adherent to the parietal pleura. The whole lung is in a collapsed condition and not larger than a man's fist.

Left lung. Lung is normal in size with T. B. deposits at apex. Pleural adhesions on posterior surface.

Microscopic examination shows alveolar walls widely separated and cavity filled with debris. Inter-alveolar tissue infiltrated with round cells and alveolar walls much thickened. Increased fibrous tissue about the bronchi with much infiltration of inflammatory cells. The blood vessels walls are thickened. Visceral pleura thickened and overlaid with fibrin.

Liver:—Capsule of the liver thickened with moderate increase of interlobular connective tissue. Portal veins and hepatic arteries show fibrous increase in their walls with a marked round cell infiltration surrounding them as well as the interlobular connective tissue.

Spleen:—Normal in size, non-adherent.

Kidneys:—Normal in size, capsule strips easily.

Diagnosis:

Heart. Adhesive pericarditis with calcification. Myocardial, atrophy and chronic myocarditis.

Lungs: Acquired atelectasis, chronic interstitial pneumonia.

Liver:—Liver shows hypertrophic sclerosis.

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EDITORIAL

SOME APPLICATIONS OF WORKMEN'S COMPENSATION LAWS.

The Supreme Court of Michigan has recently held that syphilis by prolonging a workman's disability after injury did not preclude his receiving benefits at the hands of his employers. The employer paid for 19 weeks and then asked to be relieved of further payments on the ground that the preexisting syphilis and not the injury was responsible for slow healing of the injured arm. The Court held that there could be no dividing line in the matter, that it could not be said when the injury ended under ordinary rules and its further prolongation carried on by syphilis, that the law did not make provision for standardizing health or make exceptions for men who are injured who have in them some latent disease which may later retard healing of a wound.

The Supreme Court of Connecticut held, with some dissent, that a claimant incapacitated for a time by lead poisoning contracted in the course of his employment was not entitled to compensation for such "occupational" disease and indicates that it was the intent of the legislature to provide for injuries interpreted in the literal meaning of the word. The Court further said that among the difficulties in deciding such cases, was the possibility that an employe working for many different people might slowly acquire an occupational disease from such employment, that it would be unjust to have the last employer bear the whole burden. The dissenting opinion concluded "There are two great divisions of industrial hazards injuries through accident and injuries through disease"—that personal injury sustained by an employe arising out of and in the course of his employment is entitled to compensation and that the condition came under such head, that the disease was an injury.

THE STATE HEALTH DEPARTMENT'S FAIR EXHIBIT.

The State Health Department had at Oklahoma City and Muskogee Fairs a most creditable exhibit considering the limited time for collection and arranging. The Oklahoma City management has allotted to the Department a

permanent space which they are to improve and arrange as time progresses and such an arrangement will also be made for the Muskogee Fair. It is intended to collect for this exhibit everything of a practical nature that will appeal to the visitors and enlist their co-operation in prevention of disease, improvement in food and sanitation conditions and a better collection of vital statistics.

Many thousands of people visited the exhibits and complimented the management on the display.

ABSTRACTS AND REVIEWS

CONDUCTED BY

DRS. L. F. WATSON AND L. J. MOORMAN, OKLAHOMA CITY.
AND FRED J. WILKMEYER, MUSKOGEE

COMPLIMENT FIXATION TEST IN TUBERCULOSIS

H. R. Miller in the *Journal of Laboratory and Clinical Medicine*, September, 1916, after discussing the earlier results of this test, which were productive of much laboratory interest but of little value to the physician, sounds a note of encouragement in regard to more recent methods. Many laboratories have reported results which undoubtedly prove the presence of antibodies in the blood of those suffering from tuberculosis and have proven the test to be of great diagnostic value. Clinical methods and tuberculin tests have enabled the physician to detect the presence of tuberculosis, but there has been no way to determine accurately the degree of activity or to obtain prognostic information. It is suggested that the compliment fixation test may do this, by measuring the fluctuation of the antibodies in the circulating blood. The technic employed is practically the same as that of the Wasserman test, but the antigens have varied greatly and this has led to varying results. After discussing these various antigens and the results of different workers, he concludes that the most satisfactory antigen is prepared by triturating living or dead bacilli with crystals of common table salt, then adding enough distilled water to make an isotonic solution.

Of 232 clinically active cases with positive sputum, tested with this antigen, all but three gave a positive fixation. Of 90 inactive or healed cases, 83 were negative; of the seven out of this group showing a positive test, five had had the in the sputum just a short time before the test was performed. Forty-three positive Wassermann cases gave no fixation with this antigen. One hundred other non-tuberculous cases were all negative. It seems that this test, if sufficiently standardized, should indicate the activity of tuberculous infection and to some extent, at least, prove valuable in prognosis.

L. J. Moorman.

EXPERIMENTAL EPIDEMIOLOGY IN TUBERCULOSIS—DISTASO

(*Journal of Infectious Diseases*, October, 1916.)

After reporting a series of interesting experiments, Distaso draws the following conclusions:

"Guinea pigs can become infected through contact."

"The infectivity follows a curve which is nil at the beginning of the infection and goes to the acme, and afterwards is no longer dangerous."

"It seems that the beginning of the process few tubercle bacilli are excreted, with which the new contact can easily deal, and acquire a kind of resistance which preserves the animal when the excretion is at its acme; but as soon as the infection goes on and the microbes swarm in the body, then massive doses are excreted. By this time the new contact is powerless to cope at once with this large quantity, and therefore the pathogenic process establishes itself, and this is made worse by the daily absorption of great quantities of virus. In these experiments this condition arose between the ninth and the thirty-third days after the infection."

After this period, or after the 33rd day from the time of the infection, the contact guinea pigs no longer contracted the disease. The author proposes to explain this most interesting observation by the assumption that at about this time the encapsulation of the lesions begins and that the virus which previously wandered at will in the organism becomes surrounded by a wall which lets through only the toxins.

Working upon the hypotheses that infection takes place, (1) through the mouth, (2) through the nose, or (3) through both.

Distaso, after repeated experiments, concludes that the chief channel of infection in guinea pigs is the nose. Extremely small doses of tubercle bacilli, which, given through the mouth, have no effect on the animals, when given through the nose almost certainly produce pulmonary tuberculosis.

L. J. Moorman.

THE ETIOLOGY OF THE DISEASES OF THE CIRCULATORY SYSTEM

(Janeway, *Boston Medical and Surgical Journal*)

In this article, the author presents a comprehensive account of the ultimate and contributory causes of diseases of the circulatory system. Eleven etiological factors are given as follows:

(1) Diseases due to known bacterial infections; (2) probable, but improved bacterial infections; (3) syphilis; (4) rare infections; (5) parasites and tumors; (6) intoxications; (7) nutritional disturbances; (8) mechanical disorders; (9) nervous disorders; (10) developmental defects; (11) hereditary diseases.

After calling attention to the definite increase in the incidence of diseases of the heart, arteries and kidneys, the author suggests the following means for reducing the mortality from these conditions:

(1) A reduction in the incidence of syphilis in association with better diagnosis for and more intensive treatment in the primary stage; (2) Reduction of preventable infectious diseases; (3) Public education to regard "rheumatism" as a serious malady to be seriously treated even in mild cases by the medical profession.

He further advises ceaseless investigation of the causes of these disease on the part of the profession and periodic medical examination of the presumably healthy.

L. J. Moorman.

ANEURISM OF THE THORACIC AORTA: ITS INCIDENCE, DIAGNOSIS AND PROGNOSIS

(I. I. Lemann, *American Journal of Medical Science* August, 1916.)

The author concludes that aneurism of the thoracic aorta is not uncommon, that it is often the cause of sudden death. The classical picture is found only in advanced cases. He suggests that an attitude of suspicion should be assumed toward all cases with thoracic pain and dyspnea. Dullness over the manubrium, the first and second intercostal spaces and of the vertebral column are given as the most valuable physical signs in the early diagnosis. The use of the roentgen ray is recommended in all suspected cases.

L. J. Moorman.

THORACIC DISEASES

Samuel Robinson, Rochester, in *The Journal of the A. M. A.*, August 19, 1916, remarks that the treatment of diseases of the lung, pleura and mediastinum is in a lamentably chaotic state. Much has been written on the pathology, bacteriology and clinical picture of thoracic diseases. But what are we doing which is curative for the mortals thus afflicted? Are we not grossly incompetent? Is it not probable that more co-operation between the internist and surgeon might result in better treatment of the patient? Is the surgeon operating on lesions which the practitioner might cure? Is the practitioner treating some patients unsuccessfully whom the surgeon might cure? Are we sufficiently familiar each with the other's more recent advances in therapy? Or have we perhaps made no advances?

Surgery of the pleura begins only at the point where non-operative treatments have failed. Duodenal ulcer may respond to both surgical and medical treatment. Both will be employed. Not so of lesions of the thorax. No surgeon will be fool enough to enter the chest until his "angel brother" internist fears to tread further without success.

No region in the body demands the combined efforts of physician and surgeon more than the pleural cavity. The internist occasionally needs the surgeon, and the surgeon never ceases to require the conservative help of the physician.

In true bronchiectasis, expectorants, inhalation, cough mixtures, climatic changes and vaccines fail. Artificial pneumothorax has been reported as curative. I entertain grave doubts as to the truth of such reports.

Further, do not invite or permit a surgeon to drain your case of bronchiectasis. He will do no good and possibly much harm.

Let no man attempt a lobe excision in a single operation. Your otherwise comparatively content and efficient patient, if thus treated, will soon be dead. A single lobe of the lung may be removed safely in a three-stage or four-stage operation, which I have described elsewhere.

Emphysema is another stumbling block and again a chronic pathologic condition. Surgery offers but one operation, namely, the removal of several costal cartilages on one or both sides. It accomplishes increased mobility and expansion of an otherwise rigid thorax.

In the management of tuberculosis, the practitioner has ceased to look to the surgeon for help. Ten years ago, when the experimental removal of large portions of the lungs of animals was first successfully executed, we wondered if such might be possible and feasible in tuberculosis in man. Thus far, however, such is not the case. The removal of the diseased lung of man is associated with obstacles not present in the excision of the normal lung of a healthy dog. Respiratory and circulatory disturbances occur in the process of intrathoracic operating which we are struggling to interpret and overcome, and in the diseased person these complications are exaggerated. The tuberculous patient is a priori, a poor surgical risk and the outlook for successful extirpation of tuberculous lung tissue is particularly discouraging. You read of collapsing the tuberculous lung by an extrathoracic operation, pleuropneumolysis, or the resection of numerous ribs to collapse the chest wall and, therefore, the lungs. Let us

suspend such radical and dangerous experiments until we have learned more of the actual value of collapse therapy by artificial pneumothorax. We surgeons may well await your developments with this harmless method before substituting a method that is dangerous. For the present, at least, in those cases in which adhesions prevent the introduction of gases into the pleural cavity, let nature rather than ill-applied surgery take its course.

L. F. Watson,

A PLEA FOR THE PREVENTION OF DEFORMITIES IN THE HEALING OF BURNS

Charles A. Parker, Chicago, in the *Journal of the A. M. A.*, August 19, 1916, remarks that we are all familiar with the deformities following the healing of burns and the difficulties attending their subsequent correction. The burns on the exterior surfaces as a rule cause very little interference with function, as the movements of the unsupported joint are usually best controlled in a position of partial flexion.

Deep burns may affect the integrity of the structures so severely that recovery of function is impossible and even amputation may be necessary.

The procedure is simple and aims at the prevention of the deformity by fixing the limb in the most desirable position during the process of healing and for some time thereafter to prevent subsequent contractures. I have been able to do this best with removable plaster casts applied in the early stage of healing, before contractures occur, over the proper dressing of the burn.

The elbow, wrist and fingers should be kept extended. The hip and knee should be extended with the foot at right angles to the axis of the limb, and the toe extended. For burns of the axillary region the arm should be maintained in an abducted position. In burns of the front and sides of the neck the chin must be kept high. The case can be removed daily, the wounds dressed and the cast immediately replaced during the whole process of healing.

The fixation also directly enhances the healing by preventing injury of new tissue by movements of the limbs. It relieves the flexor muscles of their constant attempts at immobilization to prevent pain and takes away the cause of the pain.

This method as applied combines two features that are mutually helpful. One relates to the dressing of the burn itself, and the other to the application of the cast. The burn, then, is an ulcer and may be treated by skin grafting or such other methods as the surgeon has found successful, provided the limb can be maintained throughout the period of treatment in the desired position.

My method in this stage, has been the application of ribbons of adhesive plaster directly on the wound and extending some distance beyond the margins for attachment to the normal skin. The ribbons are usually placed at the margin of the burned area first and then laid on in parallel strips slightly overlapping each other until the whole region is covered.

It is usually best to wait until all sloughs have separated before beginning this part of the treatment, as there is no danger of contractures occurring during this early stage. The adhesive plaster is changed two or three times a week or whenever it becomes loosened from the healthy skin. Its removal causes no pain as it does not adhere to the moist surface of the wound, and its application by gentle pressure is equally painless. By its pressure it also prevents exuberent granulations and probably reduces the amount of secretion by its influence on osmosis.

Over the adhesive plaster is placed a dressing of dry gauze sufficient to absorb the secretions that make their way out from under the plaster strips at various places. This is usually changed daily, and as it does not come in contact with the wound, its removal is also painless. Over this is made the circular plaster cast which is afterward opened at convenient places for daily removal for changes of dressing. For the limbs it is usually made bivalve. For the other regions it is cut as ingenuity suggests for its removal and reapplication.

After healing is obtained, night casts closely fitting the parts are made and these are worn for several months, usually at night only, as long as there is a tendency to deformity. Persistent use of the aftertreatment is essential to permanent success.

L. F. Watson.

PERSONAL AND GENERAL NEWS

Dr. F. G. Francisco, Enid, has moved to Kremlin.

Dr. C. W. Austin has moved from Granite to Willow.

Dr. B. F. Collins, of Stillwell, has moved to Nowata.

Dr. S. E. Williams, Hydro, was seriously ill in September.

Dr. H. W. Doty has moved from Homestead to Watonga.

Dr. R. C. McCreery, Erick, visited the St. Louis clinics in October.

Dr. R. H. Hanna and family, Prague, visited Colorado in September.

Dr. F. M. Sanger, Oklahoma City, is doing special work in Chicago.

Dr. C. G. Spear, of Atlas, is doing post-graduate work in Chicago.

Dr. A. S. Risser and family, have returned from their Colorado trip.

Dr. A. L. Stocks, Muskogee, visited the Chicago clinics in September.

Dr. H. L. Roberts, of Frederick, is preparing to move to Stockton, Mo.

Dr. and Mrs. Newton Rector, Hennessey, motored to Nebraska in October.

Dr. William Tucker, Sulphur, is visiting the clinics in Chicago and New York.

Dr. R. S. Wagner, Tulsa, has returned from an extended trip to eastern points.

Dr. E. L. Kilpatrick, Vincent, visited the home folks in Shreveport in September.

Dr. M. M. DeArman, Mangum, who has been sick for sometime, is in Hot Springs.

Dr. Ney Neel, Mangum, has returned from a automobile trip to the coast of Texas.

Dr. and Mrs. F. R. Wheeler, Mannford, are back home after a Colorado vacation.

Dr. H. C. Manning, Cushing, is doing post-graduate work in Chicago and Rochester.

Dr. W. J. Muzzy, El Reno, is doing special work in Tulane University, New Orleans.

Dr. W. H. Davis, Castle, was severely injured recently when he was kicked by a horse.

Dr. J. M. Pemberton, Okema, Medical Reserve Corps, returned for a short visit in October.

Dr. Julian Field, Enid, has been seriously ill for some time, following an abdominal operation.

Dr. J. I. Derr, Waurika, returned from an Eastern trip by boat from New York City to Galveston.

Dr. G. A. Wall, Tulsa, attended the Philadelphia Congress in October and visited eastern clinics.

Dr. C. E. Frost, of Duncan, who has been ill in an Oklahoma City hospital for some time, is improving.

Dr. F. M. Bailey, Oklahoma City, mourns the loss of an Overland roadster recently stolen from his home.

Drs. Geo. A. Kilpatrick and F. L. Watson, McAlester, attended the clinical congress of surgeons in Philadelphia.

Dr. and Mrs. Walter E. Wright, of Tulsa, announce the advent of Miss Beverly Wright, born September 5th.

Dr. R. H. Harper, Afton, attended the Alumni Association of Washington University in St. Louis, in October.

Dr. and Mrs. Fred S. Clinton, Tulsa, visited Philadelphia, Dr. Clinton attending the Clinical Congress of Surgeons.

Dr. and Mrs. F. L. Carson, Shawnee, are visiting in Philadelphia and will return by way of Chicago and Rochester.

Dr. F. B. Fite, Muskogee, celebrated his birthday with a dinner, October 17th. Nineteen physician friends were guests.

Dr. J. C. Holland, Grove, while being driven near Duneweg, Mo., was painfully injured when his car and another collided.

Dr. T. L. Willis, Granite, recently operated upon for appendicitis at the Mangum hospital, is reported fully recovered.

Dr. C. E. Putnam, Eakley, after spending several months in Chicago clinics, has located permanently in Oklahoma City.

Drs. J. C. Mahr and E. G. Newell, Oklahoma City, have dissolved partnership. Dr. Mahr will open an office January first.

Dr. W. C. Wittenberg, Stillwater, has been sued for \$10,000 on the allegation that he left a sponge in the plaintiff's abdomen.

Drs. Le Roy Long, A. L. Blesh, Oklahoma City, and George Kilpatrick, McAlester, attended the Clinical Congress of Surgeons.

Drs. Robinson, Shannon, Sullivan and Markham, Pauls Valley, have leased a building and will establish a sanitarium in that place.

Dr. H. P. Price, Tulsa, is in New York in the Manhattan eye, ear, nose and throat hospital. Dr. Price expects to be away about a year.

Dr. W. E. Dicken, Oklahoma City, attended the Clinical Congress of Surgeons in Philadelphia, visiting New York City and Cincinnati while away.

Dr. Hugh T. Scott, Medical Reserve Corps, has been re-assigned to the United States Army and with his family is stationed at Fort Kanehameha, Hawaiian Islands.

Dr. John T. Vick recently plead guilty in the United States Court at Enid, to violating the anti-narcotic law and was sentenced to serve six months in the Garfield County jail.

Tulsa physicians have notified the public that hereafter a charge of \$3.00 for day calls and \$5.00 for night visits will be the rule. Other services are charged in proportion.

Dr. J. I. Tinder, Manager of a Radium Water Sanitarium, Claremore, has been sued for \$1500. The plaintiff alleges that her feet were burned by the application of electric light.

Dr. John W. Duke, State Commissioner of Health, delivered an address to the Rotary Club of McAlester on September 26th on the economic consideration of public health matters in general.

Dr. J. Hutchings White, Muskogee, visited Chicago clinics in August and September, after which he made a trip to Northern Minnesota. Dr. White reports the fishing the finest ever yet.

Dr. J. G. Breco, Ada, was painfully injured when his car backed over him. He fell from the machine while shifting gear on top of a hill, the machine backing over him. His son succeeded in extricating him.

Dr. Walter Penquite, Chickasha, long known as Oklahoma's star fisherman, returned from Colorado in September. Dr. Penquite reports that he was one of a party of three men who in twenty-four hours, caught 530 fish. (Please note this is a report).

Craig County Medical Society and physicians from adjoining counties were guests of Dr. F. M. Adams, Superintendent, and the staff of the Eastern Hospital for the Insane at Vinita on October 16. Dr. Leigh F. Watson, Oklahoma City, assisted in holding a clinic which lasted all day.

The Mc Intosh County Medical Society met in Checotah, Tuesday, October 10, with the following program. "Newer Ipecac Therapy," Dr. G. W. West, Eufaula. "Money Season-Settlement Time"—General Discussion. "Clinic—Case Reports." "Hysterics," Dr. J. H. McCulloch, Checotah.

The Muskogee County Medical Society met October 9th. Dr. C. V. Rice read a paper on "Infant Feeding;" Dr. O. C. Klass on the "Nursing Problem." Drs. I. B. Oldham, J. G. Noble and C. A. Thompson were appointed a committee to solicit funds from the Muskogee County membership in answer to a communication from the state secretary.

Parke-Davis Company, Detroit, have out a "Jubilee Souvenir," commemorating their fiftieth anniversary from 1866 to 1916 which was held October 26th. The little book is a beautiful piece of art, containing cuts of the buildings, laboratories, main branch houses and their principal officers. The book clearly expresses the wonderful progress made by this house.

The Rock Island Railway Surgeons of the United States meeting in St. Paul had a large attendance from Oklahoma. Among those attending were Drs. C. R. Hume, Anadarko; S. W. Wilson, Lindsay; W. G. Bisbee, Chandler; J. A. McGodan, Weatherford; H. K. Speed, Sayre; Fowler Border, Mangum; G. W. Wiley, Granite; W. B. Bently, Calvin; H. M. Reeder, Asher; H. C. Brown, O'Karche; and J. A. Overstreet, Kingfisher; G. O. Webb, Temple.

The Third District Medical Society met in Hobart October 10th with about fifty physicians from the different counties attending. Dr. W. E. Dixon, Oklahoma City, held a clinic in the new City and County Hospital. A meeting to which the public was invited was held in the evening. Mr. George L. Zink discussed the Workmen's Compensation Law and after that Dr. A. L. Blesh, Oklahoma City, read a paper on Cancer.

Dr. Seale Harris, Secretary, Southern Medical Association, announces that the Atlanta meeting November 13-16, will have as its outstanding features clinics every morning from eight to ten; the Railway Surgeons, Public Health Section and Conference on Medical Education will meet Monday, while the formal opening will be held Tuesday. A reception at the Capital City Club, where a golf tournament will be held on Friday. Wednesday the visitors will be tendered a "Georgia Barbecue" at the Druid Hills Country Club. This meeting promises to be one of the greatest the Southern Association has ever held.

The Oklahoma State Baptist Hospital Association is constructing a hospital at the northwest corner of Twelfth and Walnut streets in Oklahoma City. While the building is being erected and equipped by the Baptist people of the City and State, it is intended that its usefulness may extend to every one and its charity when deserved be without regard to denomination or creed. It will be ready for occupancy December 1st, with a capacity of thirty beds and a training school for nurses. The founders the hospital are Baptist and it will be under Baptist supervision, but it will open to the public for service regardless of denominational lines.

The Oklahoma Hospital, Tulsa, formally opened August 20th, is said to be the most complete in detail of any in the state. The building is a dignified four-story affair, highly situated, overlooking the Arkansas river. It is steam heated, electric lighted, with the most sanitary plumbing; it has silent signal system, intercommunicating telephones, inclines and other modern aids and is thoroughly fire proof. The hospital contains three operating rooms; one on the first floor for emergency work, two on the fourth floor for selective operations. One of the latter is finished in green throughout, the other in conventional white. The institution is also furnished with X-ray and clinical pathological laboratory and motor ambulance. Dr. Fred S. Clinton is president and Miss H. C. C. Ziegler, for many years Superintendent of a Tulsa Hospital, is Superintendent, H. K. Brickner, Secretary-Treasurer.

The Meeting of the Medical Association of the Southwest, in Ft. Smith, October 2, 3, 4, is reported to have been a very successful meeting from the standpoint of attendance, clinics and scientific production. The officers elected were: President, E. S. Lain, Oklahoma City; Secretary-Treasurer, F. H. Clark, El Reno; Vice-Presidents, H. L. Snyder, Winfield, Kan; J. H. Thompson, Kansas City, Mo. M. M. Smith, Dallas, Texas; and Charles S. Holt, Ft. Smith. The section officers selected are: Surgery, Dr. E. E. Rice, Shawnee, chairman; Dr. St. Cloud Cooper, Ft. Smith, secretary; Medicine, Dr. E. H. Martin, Hot Springs, chairman; Dr. C. S. Bungardt, Cordell, vice-president; Dr. W. H. Bailey, Oklahoma City, secretary. Eye, Ear, Nose and Throat, Dr. D. D. McHenry, Oklahoma City, chairman; Dr. D. T. Pfeifer, Joplin, vice-chairman; Dr. R. T. Mann, Texarkana, secretary. Kansas City, Mo., was selected as the 1917 meeting place. Special clinics were held by Dr. Carroll W. Allen, of New Orleans, to demonstrate prostaticectomy under local anesthesia; Dr. J. N. Jackson, Kansas City, demonstrated his breast operation; Dr. J. D. Griffith, Kansas City, Orthopedic Surgery; Dr. Fenton B. Turek, New York, on the diagnosis of Stomach diseases; Dr. F. H. Clark, El Reno, on Goiter Operation. Drs. McReynolds of Dallas, Prince of Springfield, Caldwell of Little Rock, Moulton of Ft. Smith, held an Eye, Ear, Nose and Throat clinic. Dr. Simon of Denver demonstrated Artificial Pneu-

mothorax in the Treatment of Tuberculosis; Dr. V. P. Blair, Kansas City, the Brophy operation for Cleft Palate, and Dr. J. S. Hartford, Oklahoma City, held a clinic on Abdominal Surgery. The address of welcome was delivered by Dr. J. B. Eberle of Ft. Smith; Dr. Joe B. Bectom, President of the Association, of Greenville, Texas, delivering his President's address in his characteristic manner in response.

CORRESPONDENCE AND MISCELLANEOUS

FROM THE OKLAHOMA STATE BOARD OF HEALTH, GUTHRIE, OKLAHOMA
DR. JOHN W. DUKE, Commissioner.

DIET AND HEALTHY TEETH.

Recent investigation shows that not only does civilization tend to produce decay of the teeth, but this decay, especially among children, is to a marked degree dependent upon the diet. An examination of 10,500 school children of England and Scotland showed dental troubles to a greater or lesser extent in 86 per cent. Of 19,725 children in northern Germany, 95 per cent. School children in Philadelphia to the number of 3,236 of 7 to 14 years, showed decay or loss of 5,575 first molars and 2,188 of the other permanent teeth.

Dr. Jay I. Durand, of Seattle, in an article on "The Influence of Diet on the Development and Health of the Teeth", published in a recent issue of the Journal of the American Medical Association, says that there is no doubt that our grandfathers had better teeth than we have, but the great extent of this steadily increasing process of deterioration is best appreciated by investigations of our more distant ancestors. Examination of ancient British and Anglo skulls showed decay in the teeth in only 15 per cent of Anglo-Saxon skulls, 2.9 per cent of British skulls of the Stone Age, 21.8 per cent of British skulls from the Bronze Age, and 32 per cent of British skulls from the Roman-British Age. It was found that while Maori skulls from an uncivilized age showed only 0.76 per cent of decay, Maori school children under present civilized conditions in New Zealand show 15.6 per cent of teeth affected with decay.

Examination of a large number of children made by Dr. Durand discloses that dental conditions were best in children who had been breast fed, a little inferior for children who had been fed on cow's milk mixtures and very much worse for children fed on sweetened condensed milk, of whom 74 per cent showed caries (symptoms of decay) of the teeth.

DIRECT EFFECT OF DIET

"The significance of these statistics," says Dr. Durand, "is that a poorly balanced diet, high in carbohydrates and low in fat, protein and mineral constituents, fed during the period in which the teeth were developing and calcifying in the jaws, seems to have rendered them doubly susceptible to decay after they have erupted.

"Confirmatory evidence is added by the fact that the first molar in which the articulating surface calcifies during the first year of life, shows vastly more imperfections, faults, fissures and absence of enamel and is three times as frequently decayed as the third molar, which does not begin to calcify until the ninth year of life."

These facts emphasize the importance of a well balanced diet during infancy. The best of course is breast milk. When this is not obtainable, a properly modified cow's milk, with early addition of vegetables, fruits, and properly prepared meat. Orange juice may be added. Vegetables, fruits and meats, properly prepared and in small but increasing quantities may generally be begun as early as the sixth or seventh month. Such additions in the diet are also valuable aid in preventing or curing rickets and make far firmer elastic tissues and a more vigorous child better able to resist disease. Such a diet also tends to teach the proper functions of the jaws and teeth.

The selection of food and its proper sequence during a meal is also important in preventing the decay of teeth. The last article eaten should be one which will cleanse the teeth and leave no sticky, decay-producing residue. A tooth brush will not always remove pastries and other similar food remnants from the mouth. But a green salad, celery, radish, onions and fibrous foods eaten under the 100 to 250 pounds pressure of a healthy bite will do much to accomplish this result. Acid fruits are also excellent for ending a meal.

STATE BOARD OF HEALTH.

We are prepared to make any of the following examinations in or laboratories:

Beverages:—Chemical analysis for alcoholic content or for adulteration, substitution or deterioration of any sort. About a quart of material should be sent in a well cleaned bottle. Label should bear distinctive mark for future identification in court.

Blood:—Microscopic analysis for typhoid or malaria (later we expect to add the biological examination of blood for syphilis). Typhoid specimens are sent on aluminum foil supplied by us. Malaria specimens should be sent on glass slides.

Blood Stains:—Biological test for human blood applied.

Discharges:—Urethral, vaginal, ophthalmic, etc., are examined microscopically for gonorrhea. Smears on glass slides should be made and "fixed" by heat before covering. In cases of suspected rape the linen will be examined for protozoa.

Dogs' Heads and other animal heads:—Examined microscopically for negri bodies in brain cells to indicate rabies. Head should be shipped in double container with a little chloroform but no formaldehyde. The inner one containing head is surrounded by ice. Addition of salt to ice not advised.

Drugs:—Chemical examination for impurities, adulterants, substitution, decomposition or deterioration of any kind. Original package should be sent.

Feces:—Microscopic examination for intestinal parasites. Representative sample is sent in bottle which we supply.

Foods:—(Any article of food, whether solid or liquid)—Chemical examination for impurities, adulterants, substitution, decomposition or other deterioration. Original package should be sent when practicable, and should bear distinct mark for future identification.

Liquors:—Chemical analysis for per cent alcohol, etc., as in beverages.

Medicines:—Chemical analysis for impurities, etc., as in drugs.

Milk:—Bacteriological examination for pathogenic organisms, or other indications of pollution. Also chemical analysis where necessary. We supply container and directions.

Poisons:—Chemical analysis leading to their detection and identification.

Pus:—Microscopic examination of pathogenic organisms, especially tuberculosis. Specimen should be sent on glass slide and should be fixed by heat before covering.

Sputum:—Microscopic examination for pathogenic organisms, especially tuberculosis. Specimens should be sent in bottle tightly stopped.

Stains:—Suspected blood stains tested by chemical means. If blood is found the biological test for human blood is applied.

Stomach Contents:—Chemical and microscopic examination for poison, etc.

Swabs (from throat):—Bacteriological examination for diphtherial or other infection. We send swabs and culture tubes.

Tissue:—Pathological examination for malignant and benign growths.

Urine:—Microscopic and chemical examination for casts, sugar, albumen, etc.

Water:—Bacteriological examination for pathogenic organisms or other indications of pollution. Chemical analysis also made where necessary.

Name of sender should appear on all specimens, but a separate note of information should be sent also.

NEW AND NONOFFICIAL REMEDIES.

Solution of Hypophysis—Squibb.—A sterilized, aqueous solution of the water-soluble active principles of the posterior lobe of the pituitary bodies of cattle, free from chemical preservatives and physiologically standardized. It has the properties of the pituitary gland, as described in New and Nonofficial Remedies, 1916. E. R. Squibb and Sons, New York (Jour. A. M. A., Sept. 2, 1916, P. 745).

Occult Blood Test (Dudley Roberts).—This consists of tablets each containing 5 grains of a trituration of benzidine, 1 part, and sodium perborate, 20 parts, and glacial acetic acid (supplied in boxes containing 100 tablets in vials, and a bottle of glacial acetic acid). A tablet is treated with a weak solution of the material to be tested and a drop of acetic acid added, a greenish blue color indicates the presence of blood. E. R. Squibb and Sons, New York (Jour. A. M. A., Sept. 16, 1916, P. 879).

Liquid Petrolatum—Squibb, Heavy (California).—It is made from Californian petroleum and is claimed to be composed chiefly of hydrocarbons of the naphthene series. A brand of liquid petrolatum complying with the U. S. P. standards for liquid petrolatum and claimed to be superior to liquid petrolatum, U. S. P. E. R. Squibb and Sons, New York (Jour. A. M. A., Sept. 23, 1916, P. 953).

Thromboplastine—Squibb.—A solution of brain extract complying with the standards for solution brain extract, N. N. R. It is marketed in 20 Cc. vials. E. R. Squibb and Sons, New York (Jour. A. M. A., Sept. 23, 1916, P. 953).

PROPAGANDA FOR REFORM.

The U. S. Pharmacopoeia, IX.—The ninth revision of the U. S. Pharmacopoeia became official Sept. 1, 1916. It is a book of standards for drugs, but it is not a book of standard drugs. The pharmacopoeia includes substances which have been shown to be inert like the hypophosphites, complex and absolute mixtures like the compound syrup of sarsaparilla, and drugs which have been tried and found wanting like saw palmetto berries. There is one great advantage in specifying U. S. P. preparations: to do so, is to invoke legal standards of identity and purity. The only way to be sure of obtaining substances of therapeutic efficiency, however, is to exercise discrimination; the pharmacopoeia is no guide to therapeutically valuable drugs (Jour. A. M. A., Sept. 2, 1916, P. 750).

The New National Formulary.—The National Formulary, 4th edition, becomes official September 1. It is published by the American Pharmaceutical Association. The preface says frankly

"The scope of the present National Formulary is the same as in previous issues, and is based on medical usage rather than on therapeutic ideals. The committee consists entirely of pharmacists, or of men with a pharmaceutical training, and it cannot presume either to judge therapeutic practice or follow any particular school of therapeutic. The question of the addition or deletion of any formula was judged on the basis of its use by physicians and its pharmaceutical soundness. The considerable use by physicians of any preparation was considered sufficient warrant for the inclusion of its formula in the book, and a negligible or diminishing use as justifying its exclusion." The National Formulary contains a large number of formulas for preparations which in the main are complex and superfluous. From the Pharmacist's point of view, the book is a valuable one. Physicians who have a scientific training in the pharmacology of drugs will not want it; others will be better off without the temptations offered by its many irrational formulas (Jour. A. M. A., Sept. 2, 1916, P. 764).

The Hypophosphite Fallacy.—The Council on Pharmacy and Chemistry reports that the introduction of hypophosphites into medicine was due to an erroneous and now discarded theory as to the cause of tuberculosis and the properties of hypophosphites. After a review of the literature and in view of experimental work the Council concludes that there is no warrant for the use of hypophosphites in medicine, unless it be to secure the calcium effect from calcium hypophosphite and the ammonium action of ammonium hypophosphite. The Council reviews the claims made for the following and declares them ineligible for New and Nonofficial Remedies: Fellows' Syrup of Hypophosphites, Fellows, Medical Mfg. Co., Syrupus Roborans (Syrup Hypophosphites Com. with Quinin, Strychnin and Manganece), Arthur Peter and Co., Schlatterbeck's Solution Hypophosphites of Lime and Soda (Liq. Hypophosphitum, Schlatterbeck's), The Schlatterbeck and Foss Co., Robinson's Hypophosphites, Robinson-Pettet Company, Eupaptic Hypophosphites, Nelson, Baker and Co., McArthur's Syrup of the Hypophosphites Comp. (Lime and Soda), The McArthur Hypophosphite Co. Though in general no therapeutic claims so far as the hypophosphites are concerned are made for the following, the Council held their use irrational and directed their omission from New and Nonofficial Remedies which now describes them: Borchert's Malt Oliver with Hypophosphites, Maltzyme with Hypophosphites, Maltine with Hypophosphites and Maltine with Olive Oil and Hypophosphites (Jour. A. M. A., Sept. 2, 1916, P. 760).

Secretogen.—The Council on Pharmacy and Chemistry has reported that commercial secretin preparations examined (Secretogen and Duodenin) contained no secretin and also that secretin is inert when given by mouth. While practically admitting the correctness of the Council's findings, the manufacturer of Secretogen (The G. W. Carrick Co.) in a letter to the Council sets forth the company's claims for secretogen on a new and altogether improbable basis. Since the arguments are purely speculative, the Council reaffirms its previous action declaring this preparation ineligible for New and Nonofficial Remedies (Jour. A. M. A., Sept. 9, 1916, P. 828).

Arsenobenzol and Diarsenol.—The Council on Pharmacy and Chemistry reports that it found Arsenobenzol, made by the Dermatological Research Laboratories, Philadelphia Polyclinic, Philadelphia, and Diarsenol made by the Synthetic Drug Company, Toronto, Canada, substantially identical with salvarsan in composition, and equal to salvarsan in therapeutic efficiency. The Council reports that these products have not been admitted to New and Nonofficial Remedies because there is a doubt as to the legality of their sale in the United States. But for this doubt as to their legal status, both products would be entirely eligible to N. N. R. (Jour. A. M. A., Sept. 16, 1916, P. 879).

Glyco-Thymoline and Poliomyelitis.—The Manufacturers of Glyco-Thymoline are circularizing physicians, advising dependence on Glyco-Thymoline as a preventive against poliomyelitis. A report of the Council on Pharmacy and Chemistry pointed out that this preparation is simply a weak antiseptic, so feeble that even in full strength it does not kill *Staphylococcus aureus* in four hours and is of little, if any, greater therapeutic value than sterile salt solution (Jour. A. M. A., Sept. 16, 1916, P. 895).

Naphthalene for Automobiles.—The A. M. A. Chemical Laboratory reports that "Inajiffi" tablets are pure, or nearly pure naphthalene. The tablets are to be added to gasoline for automobiles, etc. The increase of energy produced by the addition of the tablets is probably too slight to be appreciable. Even the addition of the small quantity advised by the dealers of "Inajiffi" did give an appreciable augmentation of energy, naphthalene might be bought in the form of moth balls (Jour. A. M. A., Sept. 16, 1916, p. 897).

Mark White Goiter Treatment.—The Council on Pharmacy and Chemistry reports that Mark White Goiter Serum and Mark White Iodized Oil, submitted by the Mark White Goiter Serum Laboratories, Chicago, was not admitted to New and Nonofficial Remedies because the sale in interstate commerce of the "serum" has not been authorized by the Treasury Department, because the statements regarding composition are indefinite and contradictory, because the therapeutic claims were not substantiated and because the routine treatment of goiter is irrational. Mark White is a veterinarian and, in association with various physicians, has exploited his treatment, at one time called "Goiterine" from different cities. In Chicago he has been associated with Dr. Rachel Watkins (Jour. A. M. A., Sept. 23, 1916, P. 967).

The Therapeutic Value of the Glycerophosphates.—In view of the very convincing evidence the glycerophosphates do not possess the therapeutic properties attributed to them and are not superior to ordinary phosphates, the Council on Pharmacy and Chemistry examined the following proprietary glycerophosphate preparations: Tonols (Schering and Glatz) comprising Iron, Lime,

Lithium, Magnesium, Manganese, Potassium, Quinine, Sodium, and strychnine "Tonols", Duotonol Tablets, Triotonol Tablets, Quartonol Tablets, Sextonol Tablets, Phosphorcin Compound (Eimer and Amend), Robinol (John Wyeth and Bro.), Phosphoglycerate of Lime (Fougera and Co.) Elixir Glycerophosphates, Nux Vomica and Damiana (Sharp and Dohme). The Council reports that unwarranted therapeutic claims are made for all of these preparations. In addition the composition of Robinol and Elixir Glycerophosphate, Nux Vomica and Damiana is semi-secret, and Tonols, Phosphorcin Compound and Robinol bear objectionable names (Jour. A. M. A., Sept. 30, 1916, P. 1033).

Kora-Konia.—Kora-Konia is a dusting powder advertised to the medical profession by the "House of Mennen". It is claimed to be indicated in the treatment of acne, dermatitis, eczema, intertrigo, etc., and is said to possess germicidal qualities. The A. M. A. Chemical Laboratory reported that the powder essentially consists of talcum and zinc stearate in about equal proportions to which small quantities of magnesium carbonate and boric acid have been added. The Council on Pharmacy and Chemistry believes that the extravagant and unwarranted therapeutic claims made for this simple dusting powder are likely to lead the public, as well as the thoughtless physician, to place unwarranted confidence in it and therefore declared Dora-Konia ineligible for New and Nonofficial Remedies (Jour. A. M. A., Sept. 30, 1916, p. 1034).

AN IMPOSTOR.

A man who styles himself B. F. Little has recently been collecting money from physicians in Oregon and Washington under the pretense of being a representative of D. Appleton & Company, the medical book publishers of New York. The man's plan is to say that he is collecting for the Western Students' Benefit Association of Denver, Colorado. Doctors in Payallup, Washington, and Coquille, Oregon, are reported to have been his victims.

D. Appleton & Company are endeavoring to have the fact made known to doctors in the Far West that this man is an impostor and has no connection whatever with their firm, and that any payments which are made to him are of course at the risk of the doctor.

NEW BOOKS

Diseases of the Skin. By Richard L. Sutton, M. D., Professor of Diseases of the Skin, University of Kansas School of Medicine. 916 pages, with 701 illustrations. C. V. Mosby Co., St. Louis, 1916.

If there is one branch of medicine that is more difficult to learn from text book than others that one is certainly diseases of the skin. Sutton evidently has realized this and has filled his book with many good illustrations. Even this brought before the average practitioner with little or no clinical advantages in this line, it is doubtful if such diseases can be recognized. Another very noticeable fact is the little advance that has been made in nomenclature, it seems as if a more simple naming of skin diseases, names that would more readily suggest just what the condition is, should be adopted. Likewise the advance in the treatment is conspicuous by its absence. It would seem that with the number of text books with which the market is flooded that occasionally one would appear that would be a distinctive departure from the cut and dried plans. It seems, however, to be rather a question of being able to put out a book, or a compilation, strictly speaking, than giving us something new and original. Sutton, in his special line, is able to give us such a book. In fact, in this one such symptoms appear, but he puts on the brake suddenly lest he should give us too much of his own convictions.

Heitzman.

Obstetrics, Normal and Operative. By George Peaslee Shears, B. S., M. D., Professor of Obstetrics and Attending Obstetrician, New York Polyclinic Medical School and Hospital; formerly Instructor in Obstetrics, Cornell University Medical College; Attending Obstetrician at the New York City Hospital, Senior Attending Obstetrician at the Misericordia Hospital. 419 illustrations, 745 pages. Price \$6.00. J. B. Lippincott and Company, Philadelphia.

This is a work devoted principally to the clinical aspects of obstetrics. Much of the anatomy and physiology noted in some works in obstetrics is eliminated while the author considers largely the things that may happen in practical work as vastly more important to the physician, therefore enunciating them. Nearly all the illustrations are new, and very fine.

The Medical Clinics of Chicago. Volume I, Number VI (May, 1916). Octavo of 229 pages, 22 illustrations. Philadelphia and London: W. B. Saunders Company, 1916. Published Bi-Monthly. Price per year: Paper, \$8.00; Cloth, \$12.00.

In this issue Nephritis, Hepatic Abscess and Gout are handled by Chas. Spencer Williamson; Infantile Tuberculosis by Isaac A. Abt; Syphilitic Aortitis by Frederick Tice, and Syphilis of the Central Nervous System by Ralph C. Hamill. The book contains much valuable matter.

The Medical Clinics of Chicago. Volume II, Number I (July, 1916). Octavo of 220 pages, with 41 illustrations. Philadelphia and London: W. B. Saunders Company 1916. Price per year: Paper, \$8.00; Cloth, \$12.00.

Feeding the Normal Baby, by Isaac A. Abt, will appeal to the reader. Oral Infections, by Truman W. Brophy, are accorded the importance the subject deserves; Staphylococic Osteomyelitis by Chas. A. L. Mix; General Paresis by Ralph Hamill; Diabetes and Surgery by Solomon Strouse, and The Use of Digitalis by Arthur R. Edwards, with many other contributions, go to make up the excellence of this issue.

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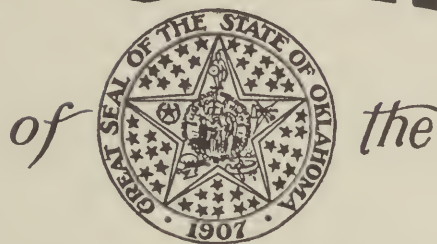
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THE JOURNAL



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SUPPURATIVE OTITIS MEDIA.*

L. A. NEWTON, M. D., Oklahoma City.

The etiology of suppurative otitis media can be classed under two general heads, predisposing and inciting.

The predisposing causes are many, and sometimes we are hard pressed to find the real underlying cause, and again there may be more than one condition and we are at a loss to know just where to place the blame, whether due to some nasal or throat condition or a systemic trouble in which the patient lacks resisting power to bacterial invasion.

Adenoids undoubtedly produce more trouble than any other single factor entering into the disease.

Owing to their location in the naso-pharynx near the mouth of the eustachian tubes, they not only keep up an irritated condition of the mucous membrane around the mouth of the tubes, but supply an excellent harboring place for the various bacteria which incite the trouble as well as often being extremely large and overhanging the mouth of the tubes, thus preventing the proper drainage and ventilation which is so essential to a healthy ear.

They may cause trouble indirectly in another manner which should not be overlooked, and that is where a child is suffering from adenoids to such an extent that it cannot sleep well at night, is restless, and the constant struggle for, and lack of, oxygen not only retards its resisting power, but from lack of rest the child is stupid and in a run down, poorly nourished, non-resisting condition, and this coupled with the other factors previously mentioned make it really doubly susceptible to middle ear trouble.

Nasal spurs, ridges and deflected septums come in for a good share of these cases by either making a poorly ventilated nose or keeping up a chronically congested condition of the turbinates with all the symptoms of so-called catarrh which is very productive of suppurating ears.

Diseased tonsils cause more or less trouble by keeping the mucous membrane in throat and naso-pharynx in a weakened, irritated condition, with little or no resisting power to bacterial invasion.

Acute infectious diseases play an important role in the etiology of suppurative middle ear cases.

Scarlet fever, measles, diphtheria, whooping cough and tonsillitis, as well as acute rhinitis, are very prone to leave the patient with a purulent otitis media.

*Read in Section on Eye, Ear, Nose and Throat, Oklahoma State Medical Association, May 10, 1916

Hospital statistics show that about 20 per cent. of the scarlet fever patients develop suppurating middle ears, and about 5 to 10 per cent. of the diphtheria and measles cases also develop it.

The cases following scarlet fever are more to be dreaded than most other infections, as the infection is usually much more virulent, has a greater tendency to involve the mastoid and is much harder to eradicate from the middle ear, and the destruction of drum membrane and ossicles is much greater.

Many middle ear infections follow bathing, especially where diving is done, the nose and throat getting filled with water, then violent blowing of the nose forcing foreign material up through the eustachian tube into middle ear carrying infective material with it, as well as irritating the mucous membrane in nose, giving rise to an acute rhinitis which may later cause trouble.

The resisting and non-resisting power of a person undoubtedly plays an important role. We see one person develop a severe purulent ear following a slight acute tonsilitis or rhinitis and we are really unable to attribute the trouble to that; and again we see people who have much more severe symptoms with all the foregoing predispositions and yet never develop any trouble at all.

Infection of the middle ear may take place from external infection as well as those coming from the nose and throat, severe blows upon the ear rupturing the drum membrane, carrying with it infective material, picking at the ears in various ways with hairpins, matches, tooth picks, etc., may accidentally rupture the drum and cause infection and should at all times be discouraged. In tuberculosis of the middle ear it is a disputed question as to whether the infection comes from the nose and throat or through the lymphatic system.

Infected and chronically discharging accessory nasal sinuses is an important etiological factor in this disease, as the pus is being continually discharged into the nose accumulating in the post nasal spaces, more especially during the sleeping hours of the patient, and then in the violent blowing, hocking, coughing and sneezing which the patient does to clear the nose it is easily forced into the middle ear, giving rise to trouble.

The diagnosis is not usually difficult to make especially in children and adults. The sudden onset of very severe pain with, at first, slightly reddened drum with later much more congested and a bulging place in the drum where the pus is pointing—occasionally we see patients who have an earache or toothache and they are unable to tell which, owing to the apparent moving about of the pain, and I always have these patients consult a dentist to make sure it is not a dental trouble. In infants the diagnosis is not so easily made, as they cannot tell of pain. They usually have a slight elevation of temperature, scream with pain and are prone to throw and toss their head or bore the back of it into the pillow.

These cases, of course, almost invariably get a ruptured drum before we see them and the diagnosis already made.

Sometimes in adults it may be a little difficult to differentiate between a middle ear trouble and furunculosis of external auditory canal, as often the inflammatory condition has extended from the external canal in furunculosis up to the drum and caused it to become red and more or less inflamed, but if we pull the ear up and down or forward and back it elicits severe pain in furunculosis while it really has no effect upon middle ear pain, and the swelling which is nearly always marked in furunculosis aids us, too, in differentiating them.

Many cases of furunculosis, of course, follow middle ear suppuration, especially in children where the ear is not kept clean and the pus is allowed to remain in the canal, causing it to become raw and infection taking place through the pores of the skin. Usually there is freedom from pain as soon as the drum has ruptured and gives vent to the pent-up pus, but occasionally the pain continues, and in these cases the rupture has taken place either in Shrapnell's membrane or high up

in the drum, leaving a dam-like condition below, holding back considerable pus and a more free opening has to be made to relieve the pain as well as effect proper drainage which is essential in curing the ear.

Tuberculosis of the middle ear has certain characteristics which are usually easily detected with the comparative freedom from pain, multiple perforations in the drum membrane, and the general physical symptoms of the patient, as it is generally secondary or associated with tuberculosis elsewhere in the system. In this disease there is rapid destruction of the drum and an early necrosis of bone in the tympanic cavity. Some authorities have gone so far as to say that 50 per cent. of all chronic suppurating ears are tubercular, but this is not borne out by thorough investigation.

An acute purulent otitis media, if not properly treated and relieved, generally develops into a chronic purulent suppurating ear running through a number of years or lifetime of the patient and subjects him to a constant source of danger of severe mastoiditis or brain abscess which may prove fatal to him. In this disease there is general destruction of the drum membrane with increasing deafness, necrosis of the ossicles and bony walls of the tympanic cavity. The pus has a very offensive odor, especially when there is bone necrosis. Upon inspection we generally find large granulations and even polyps which of course prevent proper drainage and must be cleared away before we can really get a good idea of the condition in the ear.

In many cases which have run over a long period of time the pus will dry and accumulate in the external auditory canal, sometimes packing in so hard it has to be softened and syringed out to give relief to pain which is caused by the damming back of the pus; after this the ear usually discharges quite freely for a time and then checks up and is sometimes called intermittent otorrhea. The mastoid has practically always become involved in these cases and generally so without showing any typical mastoid symptoms.

There are many more cases of chronically suppurating ear than one fully realizes unless they give it some special attention, and while these cases not nearly all have any serious symptoms from it, a sufficient number of deaths occur to class it among those diseases dangerous to life.

When we look to the treatment and care of either an acute or chronically suppurating ear, cleanliness goes further than any other one thing. Before instituting any treatment the external canal should be thoroughly cleansed of all secretion, getting a good view of the drum, noting whether one or multiple perforations, their location, and if sufficient in size and position to give free drainage to the pus.

A central perforation generally means a tubal infection and those in the posterior inferior quadrant generally mean involvement of bone.

We should note if there is any bulging or so-called sagging of the upper wall of the canal and any tenderness over the mastoid antrum; all this will somewhat aid us in making a prognosis and probable duration of the disease.

One of the first things I try to impress upon my patients is the importance of cleanliness and their care and co-operation in treating it. No one can expect to give relief to a patient who is indifferent as to cleanliness of the ear and irregular in his treatments.

Still it is wonderful what nature will do sometimes in relieving this of other diseases. I had under my care not long ago a patient who had had a double mastoiditis, the bone became necrotic and sloughed out to the external surface, discharged pus and finally healed, the patient still retaining quite good hearing in either ear, but one thing, it occurred in early childhood, this being largely in her favor.

If the pus is quite free I like to pack a strip of gauze up against the drum; this insures free drainage and it should be changed once or twice in 24 hours, de-

pending upon the amount of discharge coming away. This I discontinue as soon as the pus diminishes in quantity.

Five to twelve per cent. carbolic acid in glycerine instilled into the ear three or four times a day, after thoroughly cleansing, is very beneficial, and this remedy I feel will often abort a mild infection if instilled into the ear warm, early in the very first stages before the drum has ruptured and at least it is our best known remedy to relieve pain in the ear.

If there are large granulations with a bloody discharge, we should curette away the granulations or cauterize them with silver nitrate fused on the end of a probe and in this class of cases alcohol in varying strengths from 50 to 95 per cent instilled into the ear three or four times a day is not only an antiseptic but has a tendency to shrink up the granulations and retard their growth.

Of course it is very essential that we ascertain, if possible, the source of the trouble and remove it; more especially the ones coming from adenoids, and in removing them it is very essential that we clean them out thoroughly, being sure there are no fragments left around the mouth of the eustachian tubes.

Where we think we are dealing with a tubal infection, the pus should be blown out either by the catheter or politzer bag.

When the secretion becomes scant and pale, zinc sulphate, 8 grains to the ounce of water, acts well in drying up the remaining secretion.

Where there is a large perforation or most of the drum has sloughed out, blowing powdered boric acid or other mild antiseptic powder into the ear is a beneficial remedy.

The vaccine treatment, neither stock or autogenous, has been of much material benefit in treating this disease.

There are so many people who believe a child will outgrow this condition and let it run on until the drum has been destroyed and the hearing permanently damaged or destroyed; then it requires a long drawn out course of treatment or operative procedure to effect a cure and they soon become discouraged or indifferent and let it drift.

Many of these chronic discharging ears can be relieved by careful persistent treatment with medicine, while others require a radical mastoid operation.

NOTE—For discussion of this paper see page 393.

MYASTHENIA GRAVIS.

W. A. Jones, Minneapolis (*Journal A. M. A.*, Nov. 4, 1916), reports a case of myasthenia gravis, with necropsy, in which a thymoma was found in the thymic region just above the heart and immediately behind the sternum, imbedded in loose connective tissue and not adherent to the sternum or to any of the thoracic viscera. In commenting on the case he says the literature on the thymus gland is neither convincing nor satisfying. It seems to be generally recognized that the thymus and the thyroid are interrelated and it seems reasonably safe to assume that the thymus is in some way responsible, like the thyroid, for disturbances of bodily metabolism. It is also probable that it has some other relation with ductless glands, but their dependence on each other is not definitely determined. The presence of the thymus in a person of middle life, particularly when associated with an exophthalmic goiter, is a very strong index, he says, that the thymus is the main disturbing element, and the operator who removes the thyroid gland without recognizing a thymus hyperplasia produces a change in the circulation of the thymus which not frequently is followed by sudden death. The relation between thymic disease and the central nervous system has never been determined. The majority of thymic deaths in young people and children are probably due to pressure effects, but this does not eliminate the probability of toxins in the blood stream also.

THE MASTOID—REPORT OF CASES.*

A. W. ROTH, M. D., Tulsa, Oklahoma

Growth and development in all sciences produce changes in theory and knowledge. The science of medicine is no exception. Men in turn came forth with the panacea and disdained the stupidity of their predecessors. Their predecessor did the same before them. Each reported good results, and yet we are waiting for the last word in all branches of our profession, always hoping for something definite and more effectual.

Early in my practice it seemed that acute mastoid frequently demanded an operation, while today my experience is different, very few reach the operative stage.

Different agencies are at work producing this result. The most effective is early and free drainage of the middle ear in acute purulent otitis media. In almost every case of acute otitis media the inflammation extends to the mucosa of the antrum mastoid cells. Free drainage usually prevents a fully developed case of mastoid, especially if the infection is of staphylococcus origin.

Our chairman has suggested that we discuss the pathology, diagnosis and complication. We will endeavor to discuss some of these points briefly in the few minutes allotted to this paper. The principal points in the pathology are so familiar to you that it would seem most unnecessary to go into any detail concerning them.

One important point to be borne in mind is that because of the exudation the increased pressure within the cells interferes with the blood supply of the inter-cellular bony wall, and that this in turn produces bone necrosis, resulting in the destruction of the mucosa, and cell walls and cavities are formed. According to Boeninghaus, if the pressure is not reduced by drainage, we will soon have the breaking down of the inner or outer wall of the mastoid and the complications that follow. The consistency of the bone in childhood makes the time required for perforation much shorter than in adults.

In chronic cases the pathological conditions are practically the same as in the acute in the first stages. The chronicity of the case is due to different causes. One is through partial drainage, the pressure is reduced and the destructive process is retarded or eliminated, but the micro-organisms present continue their malevolent work. Another is due to the continued inflammation which produces a thickening of the cellular tissues. Again it is the forming of a sequestrum which may be exfoliated and discharged in the pus, or it may demand operative procedure for its removal. In some cases deposits of osseous tissue occur, resulting in the mastoid process becoming a solid bone.

The pathology of the mastoid is closely allied to that of the middle ear, which has been so fully described in Dr. Newton's paper that I will pass from the subject of the pathology to consider diagnosis and complications.

This past winter has been very productive of acute otitis media purulent and acute mastoid. Many of these cases had present in them the characteristic mastoid symptoms, and all of mine with three or four exceptions, recovered nicely as soon as free drainage of the middle ear was established and local treatment given. It is thus apparent that very few had extensive infection and destruction within the mastoid. Some of the points observed during this winter I trust will be of interest and I will report a few cases.

A young lady (Miss R.) 27 years of age, was taken ill with grippe and the accompanying cold in head, with fullness and dull pain over entire right side. On the third day of disease I was called and found ear drum inflamed, but not bulging, tenderness only marked over emissary foramen; the dull pain soon became sharp

*Read in Section on Eye, Ear, Nose and Throat, Oklahoma State Medical Assn., May 10, 1916.

and deafness more marked; pulse 110, temperature 101. A paracentesis was performed. A free bleeding followed, but no pus was present for more than six hours. About the time the pus appeared the mastoid tip became very tender and remained so for two days. The pain did not subside until the tenderness over the tip began to improve. Then all symptoms subsided quickly.

This case seems to indicate that the pus formed in the mastoid first and then drained into the middle ear, the infection having entered from the throat through the middle ear into the antrum.

Mr. S., age 45, complained of a fullness in his ear and deafness. He had been under the care of a specialist for nine days, then went to a surgeon who cared for him for three days and then referred him to me. Examination showed a catarrhal discharge present in right nares, turbinate engorged and tissue about eustachian orifice inflamed and swollen. The external ear was clear and free of inflammation. The drum membrane was a dirty white and spongy, bulging slightly. There was never pain in this case, but the sensation of fullness would waken him from sleep. Under treatment he seemed to improve and after the third day disappeared, only to return after an absence of five days, the old condition present again but more bulging,—tenderness on pressure over antrum. I opened the ear and found an abundance of very thick, almost cheesy pus. This discharge became slightly thinner and very profuse, filling the external canal in twenty or thirty minutes after dressing. The discharge ceased after six weeks' constant treatment. Pain was never present, nor temperature, but pulse stayed about ninety all the time.

This case was indeed very interesting to me because of lack of pain and absence of an acute inflammation of the drum membrane. We might call it a cold abscess.

The next case, a boy of ten years, presented the regular symptoms of acute otitis media, except for the bulging of the membrane. The mastoid was extremely tender. He had suffered with gripe; and earache had been present four days and nights. The membrane was incised at 9 a. m. A few drops of blood presented, but no pus, pain subsided. At 7 p. m. the mother 'phoned that the ear was discharging nicely, but he was having some pain. He was comfortable for three days, but that night pain became severe, both in front and behind the ear. I examined the canal, but could find no trouble in external canal. The teeth seemed to be in good condition except the lower back molar was tender when I tapped it. A dentist examined, finding a small cavity which he treated, with no relief. After another bad night we decided on pulling the tooth. The results as to pain were immediate. We found pus at the root of the tooth, the ear only discharging a moderate amount of pus. Every thing now seemed rosy. At 3:30 a. m. of the fifth day after the above, I was again called. The pain was severe over the mastoid, temperature 102, pulse 120, but by 7 a. m. he was having toothache in the upper back molar. This tooth also was extracted and pus present at each root. We delayed operation for a few hours to see what results we would get from the removal of the tooth. The pain never returned and the case had uneventful recovery.

The next case, Mrs., H. had gripe, and both ears became involved. The right broke and discharged freely, the left remained closed. I was called on the seventh day, opened left ear with free pus discharge resulting. The right ear recovered promptly, but a sense of fullness continued regardless of our treatment. The left ear was painful and very slow in healing, but fully recovered with good results.

Six weeks elapsed when the patient returned with well established mastoid developed in right ear. The area over the antrum swollen and tender and the general condition of the patient not good—operation advised and refused; after five weeks the condition was almost the same, but we could not prevail upon her to submit to an operation.

This case when last seen was having attacks of vertigo. Her regular physician has been taking care of her, urging the operation without success.

I will report one more case, a man of fifty-seven years. Profuse discharge from right ear, in fact the most abundant discharge I have ever seen from an ear. I was called the seventh day of the disease, which started with deep seated pain in ear. He always located the pain by pointing into the external canal,—but never any tenderness over the mastoid. I established treatment and for two days saw no results; the discharge, pain, temperature and pulse continued. On the third day I was advised that since the last treatment the discharge had been much more profuse and the pain was gone, also temperature. Evidently the pus pocket causing the pain had broken down.

These cases surely suggest to our minds some points in diagnosis and complications not usually met with.

In Conclusion: In the first case we had an acute mastoid present and extending to the middle ear rather than by the regular order of things. The paracentesis becoming useful only after the antrum began to drain. This would have been an operative case, had not nature operated for us.

In the second case that dirty white cheesy appearance of the membrane showed that a degenerative change had taken place, resulting in a complete destruction of the drum, for the entire membrane came away with the first discharge. When the paracentesis was performed, the knife came away covered with a cheesy matter. There was no resistance whatever in the membrane when the puncture was made. If the discharge had been liquid, the drainage would have been established at once.

In the case of the boy, it is difficult to conclude whether the infection came from the teeth or throat, or whether the condition of the teeth was coincident. The bulging over the mastoid was a simple mastoid periostitis and not due to the mastoid inflammation.

In Mrs. H's case, the fact that the right ear healed so nicely and remained quiet for six weeks, then to have so severe an inflammation present and to have it continue for five weeks without more serious results must indicate the presence of granulative tissue rather than pus.

The last case had an infected spot deep in the mastoid which required time before complete drainage could be established by nature.

Nature is a great aid in many of these cases, and with some assistance will save many operations. When these cases do reach a point requiring operation, the mastoid operation is one that certainly yields satisfactory results.

Discussion

Dr. L. C. Kuyrkendall, McAlester: I enjoyed the papers very much and I heartily agree with Dr. Newton in his treatment of suppurative otitis media. My treatment is a little different from his in that I use not only phenol in glycerin, but add a small amount of menthol and camphor, sometimes I merely use the phenol in glycerin. I would recommend that you institute your phenol and glycerin treatment as early as possible, as I feel that I have aborted suppurative otitis media by instituting this treatment, putting it in the ear as hot as the patient can bear it. In addition to this I use alcohol, after having your suppurative otitis media developed and you have established drainage, using grain alcohol in 25 per cent solution and incorporate in this as much boric acid as will dissolve. The conditions in the throat and nose should of course be attended to, and if there are any growths, especially adenoidal, they of course should be removed, paying particular attention to the openings of the eustachian tubes. In the paper of Dr. Roth, there are unquestionably cases of mastoiditis where, if the same procedure is followed that he has used in the cases he reports, we would get very beneficial results. I myself had in the month of April three cases of mastoiditis following "gripp" infection, in which there was no suppurative otitis media present at all, there was as I remember

it, no involvement of the middle ear. One of these cases was in a child 18 months of age, another 7 years of age, and the third was a young lady 15 years of age. The child 7 years of age had developed a periostitis from the mastoiditis when I first saw her, and upon operation I evacuated something like a tablespoon of pus, notwithstanding the periosteum and the mastoid prominence were necrosed to the extent there was an opening in the prominence four or five m. m. in diameter, there was no pain.

There are times I think when the man doing eye, ear, nose and throat work should limit his surgery. Too often we see a case with typical signs of mastoid and we sometimes are prone to advise operation where by waiting a few days, or by doing as Dr. Roth suggested, perform paracentesis, we may be able to avoid an operation altogether.

Dr. L. A. Newton, Oklahoma City: I have not very much to add, nor anything to reply to. You were speaking about this epidemic; I saw one case since I have been here that had these same symptoms, at first a slight sore throat, and then pain for 8 or 10 days; when I was called she had marked tenderness over the tip of the mastoid, temperature of 101, drums very hard and congested but the pain severe. After the pain had subsided in the middle ear, I felt justified in waiting, so the patient got along nicely.

Dr. A. W. Roth: I want to say that I enjoyed Dr. Newton's paper immensely and it has covered the ground thoroughly, but there are one or two points in the closing of my paper—when that temperature continues or you find you have streptococcic infection, and you are justified in operating. We have had one case after another, but most all have yielded very nicely; I think only a small per cent were operated.

CHRONIC CATARRHAL DEAFNESS.*

CHARLES M. FULLENWIDER, M. D., Muskogee, Oklahoma.

The classification of chronic catarrhal otitis media which appeals to me as the most practical, groups the disease processes under three heads: 1st, Chronic Tubal Catarrh; 2nd, Chronic Hypertrophic Otitis Media, and 3rd, Chronic Hyperplastic Otitis Media. These groups merge more or less into each other, and in the majority of cases it is probable that they represent simply different stages of the same process. It has seemed to me that since we, as otologists, in dealing with this troublesome and often baffling disease, find our chief difficulty, not in diagnosis nor in recognizing the etiological factors, but rather in treatment, it might be wiser to limit the consideration largely to the anatomical basis of the tinnitus and deafness, which constitute the difficulty from the patient's standpoint, and the measures which best serve for their relief.

The tympanic cavity and the tube are merely parts of the same organ, and as we would expect, a diseased process rarely affects one without more or less involvement of the other; nevertheless, catarrhal conditions of the tube occur in which the tympanic mucosa is so little involved that we are justified in speaking of a tubal catarrh. Chronic tubal catarrhs are apt to be characterized by a rather mild degree of deafness. The hearing and tuning fork tests may be nearly normal but the subjective sense of deafness is so pronounced that the patient is positive of his difficulty in hearing. The deafness in these cases is more subject to variations than in those with more extensive tympanic involvement. There are certain cases in which the trouble lies not so much in the tube as in the nose. A pronounced nasal obstruction may, by its interference with the respiratory air current, produce a diminished air pressure in the naso-pharynx. If the tube is fairly perme-

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able this in turn causes a partial deflation of the tympanum with retracted drum membrane and impaired hearing, inflation giving very transient relief.

The lesions in the tube itself may be due either to venous congestion or to a real structural narrowing. The latter may be due either to infiltration with round cells and an increase in the normal tissue element, or to an increase in connective tissue, together with more or less marked contraction and stricture formation. These same tubal conditions occur with tympanic catarrh and are apt to be more marked. Certain tympanic cases, however, show a wide open atrophic tube.

Chronic Hypertrophic Catarrh. In this condition the mucous membrane of the tympanum and tube undergoes thickening by infiltration with round cells and by increase in the normal tissue elements. The membrane appears thickened and red and is usually rather freely movable. The thickening may be general or local. According to Politzer, very common situations for the localized thickening are the promontory and the region of the oval window. Frequent adhesions are formed between the normal folds of mucous membrane, binding the ossicles more or less closely to each other and to the tympanic walls. The tube at this stage shows a varying degree of obstruction. There may be a generalized congestion and thickening or there may be local closure, especially at the isthmus and at the pharyngeal orifice. Frequently there is seen imperfect action of the tube, due to the interference with the action of the palatal muscles. It is probable that the tensor tympani muscle may become permanently shortened on account of the long continued retraction of the drum membrane. These changes interfere with sound conduction by the abnormal tension on the ossicular chain due to the unbalanced air pressure, contraction of the tensor tympani and, to some extent by the overloading due to the congested and thickened mucous membrane.

In the hyperplastic form, the normal mucosa is to a greater or less degree replaced by connective tissue. The tubal obstructions are more apt to consist of local narrowings due to cicatricial contraction of the new formed fibrous tissue. Frequently the generalized thickening of the earlier stage gives place to atrophy and the tube is abnormally open.

In the tympanic cavity the effects of the new formed tissue are especially marked. Numerous fibrous bands and adhesions are the rule. These bands may bind the ossicles to each other and to the bony walls of the cavity. The manubrium is frequently adherent to the promontory. The ossicular movements are interfered with by the thickening and contraction of the mucous membrane covering the joints. At times there is a deposit of lime salts in the joint and the formation of a true ankylosis. The most important of these changes is the immobilization of the stapes by the formation of bands between the head and crurae and the walls of the niche, and the fibrous thickening of the annular ligament. There may be marked loss of movement by the malleus and incus, without pronounced deafness, but loss of motion in the stapes means loss of hearing.

The formation of adhesions is greatly favored by the presence of the ligaments of the ossicles and the normal folds and bands that cross the tympanic cavity. In many ears there are numerous bands and threads that represent the remains of the foetal mucous membrane. These are often especially numerous in the region of the oval window. Politzer describes specimens in which the stapes is completely surrounded by a network of these threads. Obviously, an ear well supplied with these foetal remains, would suffer a greater liability to the formation of fibrous contractions than one lacking this frame work. Another factor in the fixation of the stapes, is the shape of the recessus of the fenestra ovalis. A deep narrow niche by the proximity of its walls to the crurae, favors interference with stapedia movements, both by swelling and contact of the mucosa and by the formation of adhesions between the ossicle and the walls of the depression.

The drum membrane undergoes the same processes of infiltration, thickening and atrophy as the tympanic mucosa. The various pictures with which we are

familiar depend on the degree and stage of the involvement. One feature, the retraction, is practically constant, even in those cases in which the tube is wide open. As regards hearing, the most important conditions are marked relaxation and generalized atrophy. Both of these conditions interfere with the vibratory action of the membrane and add to the deafness.

It is perfectly evident that in cases of pure catarrhal deafness the trouble is a mechanical one. The perceptive organ is still perfectly able to register and interpret such sound waves as reach it, but the delicate mechanism of the conducting apparatus is so impaired that only a limited number of these stimuli reach the auditory end organ. The problem of treatment resolves itself into the question of how best to remove the obstructions to sound conduction and to restore the delicate balance of the conducting apparatus. The treatment must be shaped, so far as possible, to meet the anatomical or mechanical conditions present in each individual case.

Since the trouble almost invariably begins in the nasal and pharyngeal cavities and the tube, we naturally first turn our attention in this direction. No one disputes the prophylactic value of the removal of obstructive and inflammatory lesions of these cavities. In the early and progressive stages of chronic catarrhal deafness much can still be done towards the arrest and cure of the condition, by the correction of nasal and naso-pharyngeal lesions.

The nasal passages should be opened up so that there is no hindrance to free respiration. Adenoid growths are, as we all know, one of the most common causes of ear trouble, and a considerable number of our adult ear patients will show a persisting mass of adenoid tissue. The naso-pharyngoscope will frequently show adenoid tissue within the mouth of the tube and in the fossa of Rosenmueller. These masses, while small, undoubtedly are factors in producing congestion.

Hypertrophied posterior ends of lower turbinates sometimes extend far enough back to press on the lip of the tube and should be removed. Diseased tonsils may, by their size, interfere with the action with the palatal muscles or by their diseased condition keep up a congestion of the pharyngeal mucosa. If these abnormal conditions are corrected early or during the stage of congestion and infiltration, the effect on the course of the disease is usually marked. Later in the disease, after the tubal and tympanic changes are marked, the result of such surgery is usually disappointing. During this stage we usually get good results from a careful and rational use of tympanic inflation. The limitations of this procedure are marked. We may, however, expect to accomplish certain things by its use. It restores temporarily the normal air pressure and thereby relieves the abnormal tension on the ossicles and labyrinth. It exerts a certain amount of influence on the congestion of the tympanic and tubal mucosa and finally it may prevent the formation of adhesions and may stretch or break up the weaker ones of those already formed. Its effect must be carefully watched and when it no longer gives improvement it must be stopped or used at longer intervals. These measures in the marked cases are usually insufficient to restore the patency of the tube. They are best supplemented by direct application of drugs to the mucosa and by the use of the bougie. The pharyngeal end of the tube can be reached by a curved applicator shaped like the catheter. The lumen of the tube is best treated with one of the special applicators, such as Dench's, Holmes's or Yankauer's, which are used through the catheter. One of our fellows, Dr. Dixon, has devised an applicator and a method for its use in conjunction with the naso-pharyngoscope, that offers the distinct advantage that it does not require the use of the catheter and is available in those cases in which we do not want to inflate.

A great many drugs have been used in this condition. Most of them have been discarded. Those now most in favor seem to be the nitrate of silver, the organic salts of silver and the chloride of zinc. Applications to the tympanic mucosa are easily made by dipping the end of a catheter in the solution and then inflating in the usual way.

The bougie is purely mechanical in its action. It is of value both in the diffuse congestive and infiltrative occlusions and in the narrower cicatricial ones. Great care and gentleness is needed in its use. Many of the constrictions are located at the isthmus where they are backed by the unyielding walls of the osseous portion of the tube, and the use of too large an instrument or too much force might give rise to an impermeable fibrous stricture that is far worse than the original trouble.

Persistent and judicious use of these measures will usually result in improvement. It is in the advanced cases with pronounced deafness and ossicular rigidity, especially those which show evidence of marked limitation in the mobility of the stapes, that we meet our most difficult problem. In a large proportion of these cases the mucosa is atrophic and cicatricial. If tubal obstruction is present it is apt to be due to a fibrous stricture. If examination shows that the tube is wide open the prognosis is very unfavorable, for we know then that the deafness depends upon ankylosis or fibrous adhesions in the tympanic cavity. The long list of therapeutic measures that have been suggested and tried in this condition is a very significant commentary on the effectiveness of our treatment.

Strictures of the tube will usually yield to the proper use of the bougie. In obstinate cases Duell's method of electrolysis is said to give good results. In the tympanic cases our efforts must be directed to mobilization of the ossicles. Two of the most common methods of attempting this are catheter inflation and pneumatic massage. The idea underlying both of these procedures is the breaking up or stretching of adhesions by the forcible movement of the drum membrane and through it the chain of ossicles. The careless routine use of these measures can be productive of much harm. In the first place, the drum membrane in many of these cases is already relaxed. Observation through the Seigle otoscope will show that the movement of the membrane is far in excess of that of the malleus. In case of adhesion of the manubrium to the promontory, there is little or no movement of the malleus while the membrane will show a very pronounced pouching. Frequent and repeated use of these measures under these circumstances cannot help but result in a relaxed membrane and further impairment of the hearing. Leaving aside the question of harm, these procedures are apt to be disappointing. The extreme limit of motion for the malleus is only one-third of a millimeter and of the stapes one-sixteenth. Such a short excursion may loosen the malleus and incus and even the stapes in favorable cases, but it cannot have a very marked effect on dense stapedial adhesions. Another discouraging feature is the tendency of the adhesions to reform, if we do succeed in rupturing them. This is shown very clearly by some experiments reported by Kerrison at the 1914 meeting of A. M. A. He made an incision through the drum directly behind the malleus and working through this with a blunt hook and a notched probe, endeavored to mobilize the ossicles. Immediate improvement of hearing was the usual result, but in all but one, this was quickly lost nor could it be made permanent by repetition of the procedure. One case was especially interesting. A rigid malleus suddenly became freely movable under the traction and the hearing was markedly improved. This improvement was, however, very short lived. Upon repeating the experiment later, the malleus was found still to be freely movable but no improvement in hearing could be obtained. Evidently the stapedial adhesions had again reformed and the movements of the malleus had no influence on them. It is a common observation that a first application of pneumatic massage will often produce an improvement in hearing that cannot be increased or maintained by further use of the apparatus. The explanation is probably the same as in the above case. The Lucae spring sound will produce a positive motion of the whole chain and while its application is somewhat painful it is harmless when in careful hands.

Numerous surgical procedures have been tried out. Various operations for the direct application of force to the malleus have been devised. The malleus has been dissected free from adhesions to the promontory. The stapedius and the tensor tympani muscles have been cut in attempts to relieve tension. All of them

have been abandoned as useless, though periodically some of them are revived and modified. Vapors of iodine, turpentine, menthol and numerous other drugs have been used in connection with inflation, with the idea of softening or absorbing the contracted fibrous tissue, but without any brilliant results. Within the last few years the use of solutions of dionin have been advocated for injection into the tympanic cavity. Personally I have had no experience with it and have been unable to find any reports on its use. Basing his hopes on the action of thiosinamin on scar tissue, Ernest Urbantschitch treated a series of cases with hypodermic injections of fibrolysin. While his report was enthusiastic, a perusal of some of his cases does not seem to warrant the favorable conclusions and other men have tried out the method and abandoned it. Recently I have seen a preliminary report of a few cases treated with bismuth salt of thiosinamin. Massage or exercise of the conducting apparatus by the use of musical tones has been advocated and tried to a limited extent. The underlying idea is that by using vibrations of large amplitude and of a rate corresponding to those tones that are poorly heard, the adhesions interfering with the transmission of those tones may be somewhat influenced. To be of any value, the tone range must be carefully determined and its use not carried to the point of excessive fatigue.

I have confined my discussion to local treatment. Of course systemic conditions which might influence the disease should be looked for and if found, corrected, but this is as a rule not a large factor.

I think we are all agreed that in too large a per cent. of our cases the results of treatment are unsatisfactory. Possibly this can be partly remedied by a more patient, careful study of the factors in each individual case. There will always remain a large number who will come to the aurist so late or in whom the disease has been so stubborn and resistant that with all the means at present at our command we cannot obtain a satisfactory degree of hearing. A very important part of our work is in the prevention of these conditions, not only by correcting the predisposing causes in those patients who come under our care before the mischief is done, but by contributing our share to the educational movement which is gradually teaching the public the value of giving early attention to small ailments. Personally, some articles that I have recently read, have set me to wondering if I have been doing my whole duty by those patients whose hearing I have been unable to improve. Some of these patients, as we have all observed, have very considerably lightened their infirmity by self education in lip reading. I have been in the habit of suggesting this point to those whose hearing is permanently impaired, but have made no especial effort to point the way or encourage them to acquire the faculty. Something can be accomplished by practice on those consonant sounds which are particularly difficult for the patient. We can help him by determining and classifying these sounds and encouraging him to concentrate his attention on the effort to understand conversation, and to piece out what he misses by the meaning of that which he hears clearly, and by lip reading. Too often when told that his hearing cannot be helped, the discouraged patient gives up all effort to converse with his fellows and at the same time gives up his effort to do his full share in the world's work. I do not think we have done our full duty unless we do all in our power to prevent this result and to help him by every means to lessen his handicap.

To those of you who are interested in this phase I would recommend the reading of the article published by Kerrison in the *Laryngoscope* for May, 1915.

Discussion

Dr. A. W. Roth, Tulsa: My experience has been very unsatisfactory in all these treatments, and general treatments all seem to result too largely in a great majority of cases I have seen after the treatment is stopped and they experience a new cold and new catarrhal condition is established that they are pretty largely back into the old condition. Almost invariably; of course there are some

cases where it is more lasting, but in a greater or less degree they go back to their old stage. As regards the different kinds of treatments, I don't care to discuss them. I always tell those cases where there is temporary relief that they will have some new infection and will go through the same trouble again.

Dr. E. S. Ferguson, Oklahoma City: I expect we have all had the same experience in the handling of these cases of catarrhal deafness and unless they come into our hands early in the disease it is a difficult matter to promise any great amount of relief. I have noticed, too, that even after a thorough functional examination that it is difficult to tell which case will do well and which case will do poorly. For this reason I always hesitate to promise much in cases of acute catarrhal deafness. If the case has not progressed too far I believe we get the best results by treating the mouth of the tubes or even introducing medication into the tubes under direct vision through the naso-pharyngoscope. The medicine to be used will depend a good deal on each individual's selection, because what does well in the hands of one physician sometimes fails in the hands of another. I have used nitrate of silver, iodide of zinc, chlorid of zinc, dionin, as well as argyrol, and believe I have had good results in some cases with the use of each remedy. In cases complicated with considerable amount of tinitus we have for the past year been using pneumo massage and electrical tone vibration, but so far have not been able to get good results advertised by advocates of this particular line of treatment. The trouble may be in the selection of the particular tone to use in each case, but in our hands so far we are unable to say that it is beneficial. Most of the patients get tired of the long continued treatment necessary to do them much good and then stop before you have really had a fair chance for improvement. Very frequently the hearing in one ear is practically lost before the patient seeks relief, in fact they have not noticed the defect until the second ear begins to trouble and then you can realize that your case is an old one and the chances for a cure minimized to a great extent.

CATARRHAL DEAFNESS, WITH SUGGESTIONS AS TO TREATMENT.*

W. EUGENE DIXON, M. D., Oklahoma City, Okla.

Dr. Woods Hutchinson says that "for every attack of illness, for every crippling of working power, for every early breakdown, for every premature death, there is a definite, tangible cause, a cause that is visible to the naked eye or the microscope, that can be found nine times out of ten if looked for, and can be destroyed or checked in its further course, not merely at one, but usually in three or four different stages in its career—at all stages, in fact, save the last." How true this is when applied to catarrhal deafness; and yet we, as otologists, must admit that there are hundreds, yes, thousands of people, both old and young, who are gradually and insidiously becoming deaf; whose usefulness, earning power and efficiency are lessened just in proportion as the hearing grows worse, and, saddest of all, whose mental activities become weakened or diminished owing to the elimination of the sound of the human voice. Preventive medicine is the watchword of today. Internal medicine perhaps holds first place here. To it due credit must be given for vaccination, serums and bacterins. The surgeon and ophthalmologist have done their part, but what have we as otologists done in the way of preventing or curing catarrhal deafness? It is true that as surgeons we have invaded every nook of the temporal bone and we are proud of our achievements, but is it not possible that we have sacrificed the comfort and health of the many to help the few?—for there are a hundred cases of gradual, insidious deafness, growing worse year by year, to one surgical case. It is true that methods of relief for this class have proven most unsatisfactory. This is perhaps why we as aurists do not pack our samples and take them to the

*From *The Laryngoscope*, St. Louis, June, 1916.

county and state medical societies and there extol their virtues in an effort to sell our goods.

Pathology. We are here interested only in that form of catarrhal deafness caused by an infection in the membrane lining the middle-ear chamber, with round cell infiltration and thickening, and the subsequent formation of fibrous tissue. The process is usually associated with an acute or chronic infection of the nasopharynx and, of course, is subject to acute exacerbations from time to time. It is at these times that secretions can be detected in the tympanum—not by inspection through the drum membrane, for this is too opaque usually from chronic thickening, but by the inflation of the tube.

The tube in these cases may or may not be permanently occluded. When the tubal occlusion has been a factor we will always find the drum membrane opaque, thickened and retracted. On the other hand, where tubal occlusion has not been a persisting factor the drum membrane may be a very little retracted, but is usually opaque and thickened. It is in these cases that our diagnostic skill is put to the test. The membrana tympani is opaque, so at least there must be an infection of the mucous membrane within the tympanum. The tube is open, so the deafness must be caused by an obstruction in the conducting mechanism in the tympanum; but is there a fixation of the stapes or otosclerosis, or is the deafness dependent on the existence of adhesive bands in the tympanum?

The most pronounced disturbance in hearing no doubt is caused by the fixation of the stapes, but it is absolutely impossible to make an exact diagnosis when the oval window is affected by spongification and the middle-ear is diseased at the same time. The labyrinth defect, due to secondary degenerative changes of the cochlea can best be detected by noting the loss of hearing for the higher notes of the Galton whistle.

Inflammatory adhesion bands in the tympanum play an important role in the deafness of those suffering from chronic non-purulent otitis media. These thickened adhesive bands in the tympanum are often formed out of the folds of mucous membrane connecting the ossicles with the walls of the tympanum. These folds vary a great deal in different persons, being developed much more in some than in others. The difference in the development of these folds of mucous membrane in the tympanum explains perhaps why one person with oft-repeated attacks of mild middle-ear inflammation develops a pronounced and serious deafness, while another with a similar process may suffer only a slight defect in hearing.

Chronic non-purulent otitis media, so far as we know, is an infection, inflammation or disease of the mucous membrane of the middle-ear, and about 90 per cent of the diseases of the middle-ear begin in the Eustachian tube. Again, the Eustachian tube is important to us as otologists, as it is via the Eustachian tube that we try to relieve those suffering from middle-ear deafness. Let us pause and study the histology of the mucous membrane of the middle-ear, as well as the anatomy of the Eustachian tube, for in no other part of the body is a more precise knowledge of the anatomy required in its treatment than is required in our present-day methods of treating catarrhal deafness; for today it is not enough to merely blow out the tubes and massage the ossicles, but the otologist must be competent and prepared to treat any portion of the Eustachian tube by applying medicine, electricity or surgery direct to the part affected. Furthermore, the author of this paper will present a new technique for passing a cotton-wound applicator through the nostril and into the tube without the use of the Eustachian catheter as a guide. To understand this technique we must have a clear picture in our minds of the size, shape, direction and various angles of the tube itself; besides, it is necessary to know the exact position of its mouth within the naso-pharynx, as well as its opening in the tympanum.

Anatomy. The Eustachian tube is a canal extending from the lateral wall of the naso-pharynx in an upward, backward and outward direction to the anterior

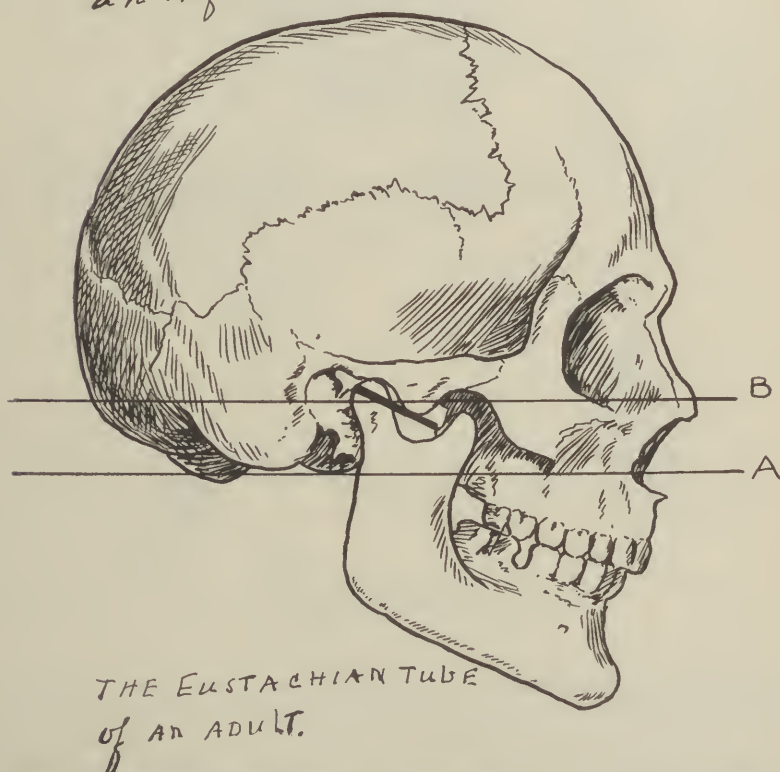
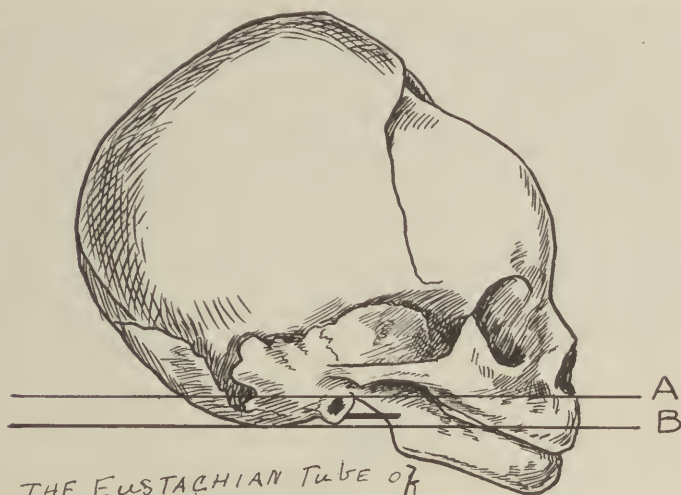


Figure 1. Showing relative positions of Eustachian tube in the infant and adult.

part of the tympanum, into which it opens about 7 mm. above the floor. It varies in length in different individuals. In some it is only 34 mm., in others as long as 44 mm., but usually it is about 36 or 37 mm., or about $1\frac{1}{2}$ inches. It is partly bony and partly cartilaginous. The bony portion, or upper one-third, is called the tympanic portion and is about one-half inch in length. The remainder of the tube is

cartilaginous and is about one inch in length. The tube has somewhat the shape of an hour glass, being wider at the ends and narrowed at the junction of the cartilaginous and bony portion into the isthmus, where its height is about 3 mm. and its breadth about $1\frac{1}{2}$ mm. It forms an angle of 45 degrees with the sagittal plane, one of about 33 degrees with the horizontal plane, and an angle of from 135 to 145 degrees with the long axis of the external auditory canal, opening outward. The cartilaginous and bony portions of the tube do not lie exactly in the same plane, but join at a very obtuse angle, opening downward. The pharyngeal opening is about 15 mm. lower than the tympanic opening in the adult, but in the infant the tube is very short, about 14 mm., contains no isthmus, and both ends of the tube are in the same horizontal plane.

While the pharyngeal portion is known as the cartilaginous division, it is well

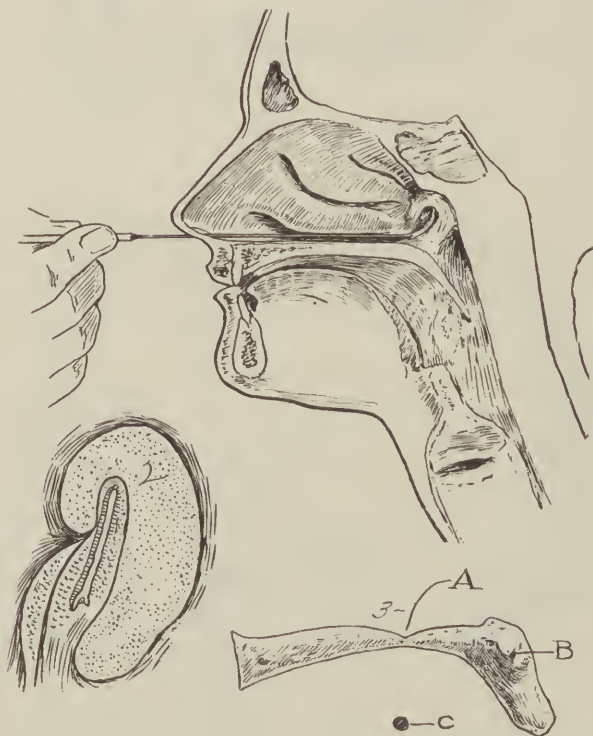


Fig. 2. 1.—Applicator introduced; 2—Pharyngeal end of tube; 3—Cast of tube, tympanum and external auditory canal.

in treating this part of the tube to remember that only its posterior wall, root and upper part of the anterior wall are really cartilaginous. The remainder of the tube is made up of fibrous tissue. Its posterior or median wall is formed by a plate of fibro-cartilage, which projects vertically upon the lateral wall of the naso-pharynx. The projection or ridge forms the posterior wall of the pharyngeal mouth of the tube and the anterior wall of the fossa of Rosenmüller. The upper margin of the cartilage of the posterior wall curls forward and downward and is continuous with the roof and cartilaginous plate of the anterior wall. This anterior plate of cartilage is narrow and forms only about one-fifth of the anterior wall of the tube. The rest of the anterior wall and floor are formed by a fibrous membrane. We see the formation of the membrano-cartilaginous portion of the tube is quite ingenious, in that the narrow cartilaginous plate, in the upper part of the tube, also forms the upper

part of the anterior walls and tends to preserve the patency of this part of its lumen. It is this upper portion of the lumen of the membrano-cartilaginous tube which represents the direct continuation of the bony canal.

It is well to remember this in all treatments of the Eustachian tube, in passing the catheter first, and especially in passing the bougie through the catheter into the tube—and most important of all it is well to remember it if the author's technique is used, i. e., passing a cotton-wound applicator or the tip of a Eustachian syringe through the cartilaginous part of the tube direct, without using the catheter as a guide.

Technique. The applicator is metal, with its distal end curved or bent to an angle of about 45 degrees. The curve or bend should be at various distances from the end, or in other words, we should have from three to five applicators—No. 5 to be inserted one-half inch into the tube; No. 4, three-fourths of an inch; No. 3, one

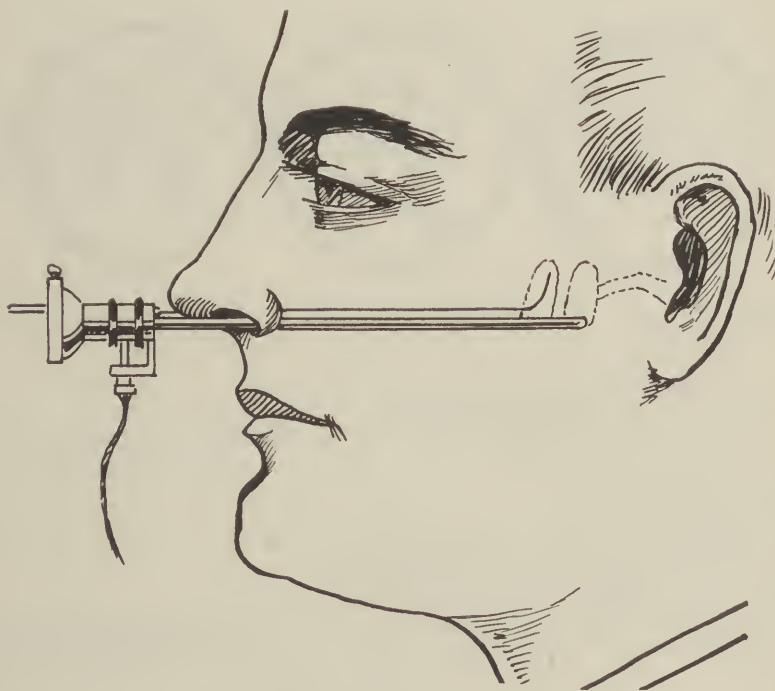


Fig. 3. To illustrate method of treatment.

inch; No. 2, one and one-fourth inch; and No. 1, one and one-half inch, the latter to be used only in exceptional cases. To treat the right tube we introduce the Holmes naso-pharyngoscope with the corrected upright image into the naso-pharynx through the left nostril. The instrument is now adjusted so that the upper half of the mouth of the tube is in plain view. If adjusted so that the entire mouth of the tube is in view, it seems to contort the image so that it is almost impossible to pass the applicator or syringe points for any distance into the tube. This is an important point for the beginner to remember. The applicator having been previously wound with cotton so that the tip and that portion to be inserted, as well as the bend or curve, is covered, it is now dipped into a five per cent cocaine and adrenalin solution and passed through the right nostril with the left hand in such a way that the tip of the applicator is on the floor of the nose. The operator now looks into

the scope which he holds with his right hand and sees the applicator as it emerges into the naso-pharynx, with its tip pointing downward. Still holding it in this position, he carries it backward and outward into the mouth of the tube, which is from 8 to 12 mm. in a vertical direction, and, remembering that the floor and lower four-fifths of the outer wall of the tube is fibrous and therefore movable, and that the anterior part of the tube is funnel-shaped in the vertical diameter, he makes use of these anatomical facts and at once places the tip on or near the floor of the tube, inserts, and, again remembering that the upper part of the cartilaginous portion of the tube is patent and continuous with the lumen of the bony portion, he rotates the applicator or syringe tip outward, upward and backward, all the time keeping the instrument after its rotation in the upper part of the tube or between the anterior and posterior plates of the upper portion.

If the operator meets any resistance it is well to pause for a few seconds to anesthetize and deplete the mucous membrane, then gradually pass the applicator

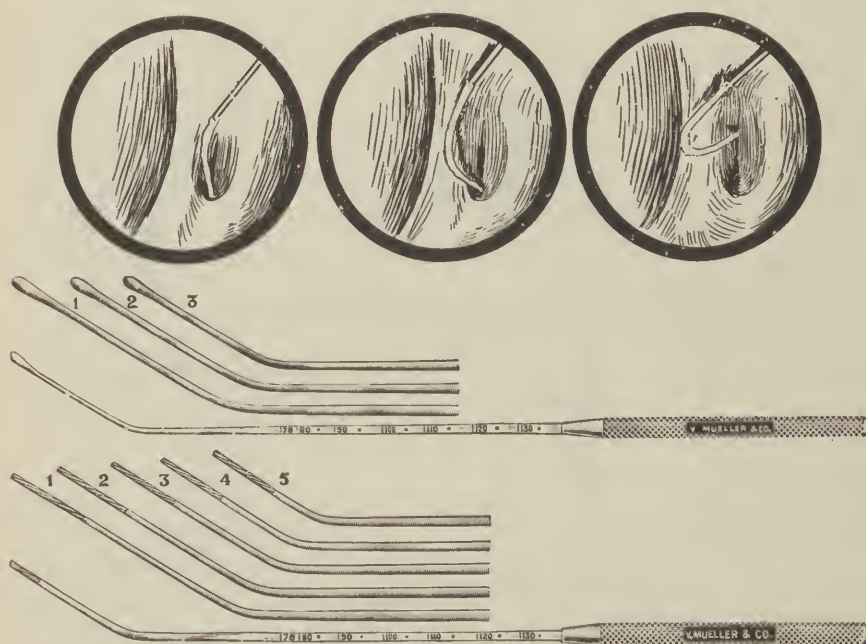


Figure 4. Eustachian applicators.

a little further, and so on until the isthmus is reached, then leave it in place for a few seconds to thoroughly deplete the mucous membrane. It is well now to withdraw the applicator and immediately introduce another, wound as the first one with cotton, but less abundantly, for at first the operator was feeling his way and had the point well protected for fear of traumatism to the tube. He now wants to accomplish two things—to go through the isthmus, for here strictures or adhesive bands are most often found, and, at the same time, treat the entire cartilaginous tube with a one per cent solution of nitrate of silver, or perhaps argyrol. Again the same technique is used, but this time a No. 3 or No. 2 applicator, wound very thinly but securely with cotton, is employed. He passes it as before for about an inch into the tube, after first dipping it into a one per cent solution of nitrate of silver. It will now pass through the isthmus very readily, providing the tube is patent. The operator, as well as the patient, can feel the peculiar sensation, as with slight pressure the applicator slips through, apparently into a cavity. If the

tube is obstructed, either by stricture or fibrous bands, the operator uses the same precaution as to force as he would in passing sounds into the urethra; in fact, force is never justifiable, a slight continual pressure being all that is necessary in any case. Success may not be obtained the first time, but it is better to wait and try again later. Electrodes and bongsies, if made properly, can be passed by this technique.

Treatment. It is not the province of this paper to go into the treatment of catarrhal deafness very extensively, but merely in a brief way to emphasize those things which in the author's opinion are most essential, as inflammation extends by continuity of tissue. The first things to accomplish in each and every patient is to put the nose, naso- and oro-pharynx in as nearly a normal condition as possible.

(a) Remove enlarged or infected tonsils and adenoids. The naso-pharyngoscope has proven to me that 75 per cent of people of whatever age have adenoids, and it is almost impossible to find healthy tonsils in the adult. Both adenoids and tonsils should be removed with the greatest care. No case should be discharged until the naso-pharynx has been thoroughly examined, say a month or six weeks after the operation, to see that there are no adhesive bands extending across Rosenmüller's fossa to the cushion of the tube. These will cause deafness, and the osteopaths are now curing deafness by what they think is merely massaging the mouth of the tube, but in reality they are breaking up these adhesions. Again, the palatal muscles have more or less control over the patency of the tubes and therefore should be freed from all adhesions.

(b) Too little attention is paid to ethmoiditis and sphenoiditis.

(c) All neoplasms of the nose and throat should be removed.

(d) Spurs and ridges are thought to cause a contraction of the tensor tympanic muscle, which interferes with the normal tension between the drumhead, the ossicles and the labyrinthine fluid, and thus causes deafness and tinnitus.

In fact, every abnormal condition of the nose and throat should be corrected before the ear treatments are begun. This will often cure the deafness.

After recovery from all throat and nose operations, and especially secretions in the naso-pharynx, the author passes an applicator wound with cotton, which has been dipped in a five per cent solution of cocaine and adrenalin in one tube, and immediately follows this by another dipped in a one or two per cent solution of nitrate of silver. The next day the other tube is treated in a like manner. This mode of treatment is continued until the hearing is improved or until the tubes are patent. The author has treated each tube every day, but feels that better results are obtained, perhaps, by not treating so often. It may be better, after the first week or two of treatment, to only treat each tube twice a week, then once a week. Finally the patient will tell you himself that the air passes freely, at which time it is best to lengthen the interim between treatments.

It must be remembered that we treat the tube for a double purpose—first, to open the tube for the purpose of restoring normal tension between the drumhead, the ossicles and the labyrinthine fluid; and, second, to treat the mucous membrane of the tubes as you would the mucous membrane of the urethra or the mucous membrane of any other part of the body. Thus good results are obtained by continuing the treatment after the tube stays open. In some cases the deafness is greatly relieved or cured, but the tinnitus continues; however, it will generally become less and less in intensity as the treatment is continued. I seldom use inflation for the reason that in my practice most cases have previously been treated time and time again by inflation and vibration of the ossicles without getting any permanent relief. A stricture or fibrous bands in the tube cannot be relieved by inflation. Thus good and lasting results cannot be obtained. It is surprising how quickly these same cases can be restored to usefulness by the direct treatment of the tubes. The author has cases which have been treated off and on by various otologists in

different cities without apparent relief, and yet they have not heard a telephone ring in ten or twenty years, much less the tick of a clock.

These cases have been made to hear normal conversation by the direct treatment of the tubes. Of course, the prognosis is not good in those cases where the occlusion of the tubes has not been a factor in the cause of the deafness, or in those cases where the deafness and tinnitus is caused by adhesive bands within the tympanum. In all other cases the results for useful hearing have been very encouraging.

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MOUTH AND THROAT INFECTIONS: THEIR RELATION TO DISEASES OF THE BODY*

W. H. LIVERMORE, M. D., Chickasha, Oklahoma

We should be radical in thought yet conservative in practice, planning "tomorrows" that are different, but building "todays" along lines that, while not too freakish for practical purposes, still always have a little of the "upward" or "tomorrows" trend. Tempering our dreams with reality, and spend our "nows" striving to give a rising slant to things so that when "later on" arrives they will just naturally find themselves on a higher plane.

It may be, that what to me is new to you is old, yet I feel impelled to dwell on this subject with the hopes that I may bring out a free discussion and so make us all think.

Let me quote a little from the poet Pope:

"Vice is a monster of so frightful mien
As to be hated needs but to be seen;
Yet seen too oft, familiar with her face,
We first endure, then pity, then embrace."

If you will endure my talk some will pity and then embrace.

We have known for a long time that the tonsils often carry latent or quiet abscesses in their depth. It has taken a Rosenow to show us that rheumatism was pus in the joints, that cystic ovaries are pus infected ovaries, and that the pus is carried to the ovaries, usually through the blood stream.

Let us for a few moments stop to consider some of the remarkable findings of Rosenow. He is a very conservative man and has been very slow in making his findings known to us. Some of his experiments which have had great weight, he did not publish for one to three years after he had gone over them repeatedly to verify them, and some he has never published. Just a brief mention of some of his findings so that we may bring them up again to our "minds eye" for consideration. He showed that bacteria taken from ulcers of the stomach, appendix, infected gall-bladders, rheumatic joints, and cystic ovaries, when injected into animals, in the majority of cases caused infection and inflammation in the localities corresponding to those from which they were taken.

Out of forty-nine animals injected with the germs taken from cases of appendicitis, forty-one developed appendicitis. Out of seventy-nine animals injected with the germs taken from ulcers of the stomach, forty-seven showed hemorrhage. Out of twenty-seven animals injected with germs from inflamed gall-bladder, twenty-two developed gall-bladder affections. Out of seventy-one animals injected

*Read in section on Surgery, Gynecology & Obstetrics, Oklahoma State Medical Assn., May 10, 1916

with germs derived from cases of rheumatism, forty-seven developed joint affections, thirty-three developed endocarditis and nineteen developed pericarditis, thirty-one developed myocarditis, and twenty-eight kidney affections. He found in a series of twenty-five cystic ovaries a growth of streptococci in fourteen. Two of these growths when injected into the veins of dogs and rabbits showed a marked affinity for the ovaries. After his work on the ovaries he says that the conclusion seems warranted that fibro-cystic degeneration of the ovary is due commonly to low grade hemotogenous infection by streptococci having selective affinity for these structures. He also points out the tonsil as being the focus from which this infection is carried to the ovary through the blood. *Journal A. M. A.*, Apr. 15, 1916.

There is no doubt that the tonsils often carry a focus or foci of infection from childhood to old age. Yet the fact that the greater part of these organisms are taken up by the rich lymphatic arrangement around the tonsils and so taken care of by nature's special bacteria destroyers, and so the other organs of the body are spared to a great extent. Yet nature often fails here and the bacteria from tonsillar foci often gain direct entrance into the blood stream and are carried to all parts of the body.

In the jaw bone we have a peculiar arrangement. Here we have an outer and inner layer of compact bone between which is a spongy or porous layer through which the teeth erupt and in which the roots of the teeth rest. Here, then, is almost no lymphatic structure and so when there is a focus of pus at the roots of the teeth the pus is forced directly into the blood stream.

We will have to give the honor of the discovery that devitalized teeth are harbours of pus and a constant focus, to the dental profession and through the Dental Research Laboratory.

It has been proven that the tonsil and the apex of devitalized tooth roots often harbor streptococci for years. These facts had little significance to us before the experiments and findings of Rosenow.

Dr. M. L. Rhein, of New York, made the statement, while in Kansas City at the Tri-State Dental Meeting, that improperly filled teeth had killed more people in the United States in the last fifteen years than had been killed in the European war. Weston A. Price at the same meeting brought out the fact that these apical abscesses and granulomas existed for years in mouths and have been altogether unsuspected. He made the statement that eighty per cent of devitalized teeth which had all root canals filled to the apex showed granulomas. That one hundred per cent of devitalized teeth in which one or more root canals were not filled to the apex showed granulomas. Here then we have a great field for chronic foci of infection. This does not mean painful or bad looking teeth, for the greater part of them are painless and often show no signs of trouble, without an X-ray picture.

When we consider that the majority of tonsils, old and young, carry foci of infection and that the jaws very often are culture tubes which constantly feed pus into the blood stream, it is very fascinating, and when we realize that the great number of diseases (and the number is constantly growing) where it is proven that they are caused by pus being carried to the affected parts or organs by the blood stream. It is hard to desist from taking all my time up on this one line.

I am going to turn aside and consider some of the mechanisms of blood carried infections and try to answer some of the questions of why pus from a tonsil or apical abscess of a tooth selects one organ in one patient and another organ in another patient.

Why does the streptococci from a focal infection attack the nervous system in one person and why does it attack the stomach, the appendix, thyroid gland, pancreas, kidney, etc., in others? Again why do these same organisms when injected into other animals have a tendency to attack like organs in the animals injected? As Rosenow has said, "My streptococci are mine and your streptococci are yours."

To get at this, let us consider the mechanism. Let me use some of the experiments and illustrations of Weston A. Price, of the Research Dental Laboratory of Cincinnati, to answer these questions. There may be something in chance, but there are the exceptions to nature's laws.

The moth goes to the light, not because it chooses to but because it is impelled to. In the spring, did you ever watch the little catipillars on the limb of an apple tree, when they first hatch out? They do not go to the bottom of the tree where the ground is damp and cold and where they would perish. They go up the branch out to the very end of the twig where they find food in the delicate leaf just coming out. It is not reasoning power that tells them that food is that way, but their mechanism is such that they have to go toward the light, it is the light striking their eyes that causes the contraction of the muscles that causes them to crawl. Experiments have been tried with these little fellows and they will actually starve to death with food right at their tail if the light is away from the food. After they have eaten then they can go at will.

Again for an illustration of mechanism, take the example Dr. Price uses of the mechanical dog, built by a genius, that would follow him when he carried a light in the dark. The mechanical dog was propelled by electric motors and the eyes were constructed of helium plates; helium turns or is deflected when light hits its surface and so would make the contract and start the motors; when the light was moved to one side the one eye received more light than the other so one motor would run faster than the other and turn the dog so it would follow its master with the light. Not because of a mental activity but because of the mechanism.

The corn is planted in the ground, it sprouts and sends its shoots up, because it has to go to the light.

All life has to have food and that food has to be prepared. The food for the new life in the sprouting corn is stored up in the kernel, it is prepared for the new life by the heat and moisture in the ground.

We require food and it has to be prepared differently from the food of the horse. Naturally all things select their food. If we should go out in the woods with our lunch basket and take dinner with a woodchuck, he would pass our dainties up for roots, bark and grains. So all life has to have food and their food has to be prepared for them.

Let us take for example streptococci from the root of an improperly filled root canal, which are forced over into the blood stream. In the old nerve canal of the devitalized tooth, small I will admit, but for streptococci a veritable banquet hall. They are out of the blood stream and in a media of low oxygen tension. Now when they escape into the blood stream they are in a media of high oxygen tension, so they become a comparatively easy prey to the phagocytes in the blood.

If you will remember your work in the bacteriological laboratory, how you used to grow a culture in the presence of oxygen and then change this culture and try to grow it as an anaerobic culture or away from the oxygen or vice versa. The simple changing from an anaerobic to an aerobic culture weakened your growth and often killed it. This same mechanism is made use of by the body in its war against germs. Again as the phagocytes kill these bacteria a chemical change takes place to help the destruction of the germs.

While the germs are in the blood streams they are like an enemy in a hostile country. They cannot find food and are always on the defensive. To protect themselves they clump, as we know the typhoid bacilli do, when the disease has progressed to certain stages. You know we use this fact in our test for typhoid by suspending typhoid germs from culture in hanging a drop and seeing the germs swim here and yonder through the field, then allowing a little serum from a typhoid patient's blood to flow under the slide, the swimming slackens and the germs clump in bunches. So they get to clumping in the blood; eventually some of these clumps are large enough or reach a capillary small enough that they can occlude it, then

we have a thrombus (small, I will admit) but large enough for many bacteria. The bacteria now are out of the blood stream, so in a medium of lesser oxygen tension and can find food. The blood throws out around this thrombus an army of phagocytes which lay siege to and overcome this little band, but a little tissue has been destroyed and a little scar will form (small also, but we are speaking of bacteria). More important yet is the fact that the bacteria have found food, a chemical change has been started so that the next clump of these bacteria will not have to be so large to block a capillary as they seem to stick to the capillary walls in this vicinity. So the process is repeated and we get ulcers of the stomach from blood carried infections, etc.

It is interesting to note that many have tried to produce ulcers of the stomach in dogs by feeding them pus. Even opening the stomach and injuring the mucosae and then feeding the dog pus, only to see the dog keep well and the stomach heal.

Turck, of New York, claimed to have produced one but has been unable to repeat it, and not until Rosenow injected bacteria into the veins of animals could we produce such lesions almost at will.

The fact that culture taken from chronic foci in the body can be injected into animals and produce nephritis, inflammation of ovaries, gall-bladder, stomach, pancreas, joints, heart, skin, etc., puts a new light on disease of the human body. For me and many of my colleagues it has changed our attitude completely in regard to many diseases and has proven a wonder to us. Cases that a year ago I passed up as hopeless, today I am receiving back with much interest and pleasure, for they have a new meaning for me and many of them I am able to give that which they seek.

Today cases of nephritis, diabetes, chorea, rheumatism, neuritis, hystero-epilepsy, pericarditis, endocarditis, acne vulgaris, and a host of other skin diseases, have a different meaning to me than they did a year ago. In fact, the very foundation of my medical knowledge has shifted and I am convinced the shift has been to a firmer, more rational knowledge.

We have had case after case of acute and chronic nephritis in which we have had the pleasure of seeing the symptoms subside and the urinary findings clear up in a most incredible time after removing such foci of infection as diseased tonsils or improperly filled teeth. We have cases of endocarditis, myocarditis and pericarditis which have suffered for years and been told by ourselves and others that many of these apparently regain their health and forget their weakness after extracting some teeth whose apices harbored pus.

In our search for foci of infection and the cleaning out of these foci, we have had the most interesting and gratifying results. As I look back over the past, I can see case after case that I have been unable to save from an early grave, that today I would like to have an opportunity to give assistance.

In the past thirty years the death rate has been materially lowered, yet in that same time the deaths due to nephritis, heart and vascular lesions, and nervous disorders, has been on the increase. So much so that it has caused almost anyone who reviews the vital statistics, to pause and wonder why.

In the past twenty-five to thirty years the dentists have been so perfecting their art that they can keep almost any kind of a tooth in the jaw without pain. That was the acme of their aim, but today the dental profession is taking a different view of the mouth and teeth. Many have the courage to condemn a tooth that is hopelessly diseased or cannot be filled to the apex of its roots.

Pus from chronic foci of infection in the jaws or tonsils may be carried to the kidneys and establish a selectivity for the kidneys. Little septic thrombi occur in the kidney producing microscopic abscesses. If there is a large enough shower of these little septic thrombi, we have cloudy swelling of the kidney. If the thrombi come a few at a time, we have a chronic inflammation set up. In time the scar tissue produced in a million or so of these thrombotic areas will give us the con-

tracted kidney. Let me here sound a note of warning. If you do not want to be dissatisfied in your results, be sure you remove all the foci of infection. You cannot stop the progress of a nephritis, or heart lesion by pulling teeth, even though the teeth are badly at fault, if you overlook a tonsil which carries a focus of pus. These patients when they once get sensitized must be freed of all their pus bearing foci. Billings of Chicago emphasized this fact over a year ago. You cannot tell from the looks of a tonsil whether it is a harbourer of pus or not. All of you who are removing the tonsil with their capsules, know how many times you get quantities of pus and secretion from the depths of a harmless looking tonsil. I have found a fourth of a drachm of infective material in the depths of a tonsil that was so small that I had to search for it after the patient was asleep.

You cannot cure rheumatism by removing diseased tonsils, if a tooth or teeth have apical granulomas. We have failed in some attempts by overlooking one small dental apical granuloma. Do not be deceived by looking in the mouth and not seeing any evidence of trouble, the X-ray may reveal wonders to you.

In our surgical work, the subject of focal infection has had a wonderful influence. We are even more conservative of ovarian tissue than before and have an assurance of permanently curing our patients. You all know the fear and trembling we have had after operating a pelvic case and dealing with fibro-cystic degenerated ovaries. We are removing only the grosser degenerated parts of the ovary, by plastic operation or by ignipuncture, and then clearing out foci of infection in the mouth and throat. Our results are very gratifying.

I will not dwell longer on the practical bearing that mouth and throat infections have to disease of the body, but I want to reproduce some of Rosenow's photographs.

As I have followed the work of Rosenow, it has been intensely interesting to note the way he changes the form and character of bacteria. For example taking a strain of streptococci and changing them to diplococci. He does this by varying the oxygen tension of the media in which they grow. He has further shown us that he can inject a strain of streptococci recovered from a fibro-cystic degenerated ovary into animals and find diplococci in their ovaries, as well as strains of streptococci.

Discussion

Dr. A. B. Leeds, Chickasha: We come to you today with a series of 218 cases in which we have secured definite results. We do not claim an absolute cure in every case, neither do we claim that the mouth and teeth are the cause of all the disease of the body. We do claim that in order to get results we must have an absolutely correct diagnosis. In many cases we have found that we have been passing up infections of the tonsils and infections of the teeth from a casual examination and from casual X-ray examinations we have not gotten results because we have not found just exactly where the trouble was. We have a few slides from a few of the cases and I wish to mention some of the few of the salient facts about these cases, showing the different conditions in which we find the infections and in which we got definite results by removing these local infections.

Dr. J. R. Caughron, Oklahoma City: I feel some delicacy in addressing an intelligent audience of medicine doctors, since I am only a dentist, but when I get up before you and think of the infections that are caused from the teeth and mouth, I think of what C. N. Johnson of Chicago said—"Gentlemen, when we learn to treat our patients as we would have our mothers, our brothers, our sisters and our wives treated, then we will all accomplish something." That is the trouble today. We are lacking in pathognomy. We don't give the pathologic conditions proper consideration and when I see a man smile when these conditions of the teeth and infections, etc., are being shown on the screen, I think he is lacking in pathognomy. Our schools do not give us the pathognomy we should have and until that time we are certainly going to fall short of what we should do and owing to the limited

time I will start in with a few slides and say a little in regard to the teeth, but I would like to say that when a patient comes to my office I do not say, "Mr. So and So, your teeth are in a bad condition." I say, "Mr. So and So, you should have a thorough physical examination"; but I have had cases treated by our very best men and after making a blood examination or Wassermann have found them positive. I want to say to every man in my hearing that before I would attempt to treat your patient, I would insist upon a thorough physical examination.

I had a man come to my office for treatment and I called up his physician and the physician said, "This man is all right; I have known him for twelve years and he doesn't need a physical examination. If you are afraid to prescribe him a little emetin, I will prescribe it." He came the next day to my office and said, "I am alright." I said, "No, I won't attempt to treat you until you have a physical examination." He had an examination and was found to be both tuberculous and syphilitic, and I said, "So you knew?" And he said, "Yes, I have known this for about five years, but I don't want my physician and family to know it."

Until we get down and get to the real pathological condition, we are going to fall just like that.

Dr. Bonham, Hobart: I want to say that I enjoyed the paper very much and to report just two cases which I recently had; one was a doctor 55 years old, from an adjoining town. He came to my office with a heart lesion, effusion in the feet up to the knees. I examined him pretty thoroughly and found him to be infected in the mouth and slightly in the valves of the heart. Dr. Moorman was in Hobart at the time and he also examined the heart and found it in the same condition and recommended the removal of the teeth. The next day this doctor could not lie down to sleep; he had had to sit up for several weeks and sleep; he could not even lean back in the chair. We gave him gas for his teeth. All of them were so bad we thought best to remove them all. After having given him gas he leaned back in his chair and felt much better, and afterwards I saw his dropsical condition was better.

The other case was of an old man 82 years old. He had dropsical effusion in his feet and legs. We carried him up to the dentist's office and removed his teeth and he is very much better at this time—about three weeks after removing his teeth.

Dr. Livermore, (Closing): Dr. Caughron, the discussion is gratifying to me. The thing most of us will have to do at the present time will be to have these teeth extracted because the dentists cannot fill them. One thing I would ask you, to try out your focal infection on your old given-up heart cases. Look after them and see what it will do. It is not inagination with us, it is absolute fact. We have conditions that make us wonder. I have received a lot of criticism that I am a crank on this subject but I will venture that if you will carry this out along the lines and will take your old bad cases of heart disease, disease of the kidneys, diabetes, and the cases you have given up; get after your focal infection and I venture you will be just as crazy on the subject as we are, because we have had case after case and I tell you we have had this to do. We have not always had a dentist like Dr. Caughron present, unfortunately. We have a man in our town who went to a prominent physician with a bad mouth full of teeth; some of them would not stay in if it was not for the fact that they were crowned and we could not get those teeth out. The upper ones we got out and the lower ones were just as bad. If you have them focalized once you have to take all of them out. We have had cases that we have given up and told them they were going to die. We have had cases that we operated on for cystic conditions of the ovary and got no results. All of you have done surgery on ovaries and know how we have to look on them. If we have a young girl and find a cystic condition of the ovary we do very little with the ovary but go into the mouth and clean out the tonsils if it has not been done before and you will find the good results if you will try it out.

PROCEEDINGS OF ST. ANTHONY CLINICAL SOCIETY

DR. D. D. McHENRY, Pres. DR. L. J. MOORMAN, Sec.

Case Report by Dr. R. M. Howard.

Dr. R. M. Howard presented a man age thirty-six, who had two ulcers on the anterior surface of the right leg for the past four years.

Physical examination: Negative except for marked varicose veins of the right leg involving both the greater and lesser saphenous veins. Trendelenburg test shows incompetency of the valves of the external veins. Constriction test shows incompetency of the perforating veins.

Laboratory examination: Wassermann, weakly positive, slight amount of albumen in urine, R. B. C., 5,650,000; W. B. C., 79,000, P., 66 E. 28.

Operation: On September 11, 1916, resection of the greater and lesser saphenous veins was done. The greater vein was tied off close to the saphenous opening, cut and dissected out to the knee with the Mayo stripper. The branches in the leg and the lesser veins were removed by turning back flaps of the skin and subcutaneous tissue, removing the veins from the inside of the flaps. Incompetent perforating veins were dissected up and tied beneath the fascia in the neighborhood of, and beneath the ulcers. The ulcers were then skin grafted.

Convalescence was uneventful, and the ulcers are now healed.

Remarks: This was a typical case of varicose veins with ulcers of the leg in a man who has done a great deal of hard labor with heavy lifting. This with a probable congenital weakness of the veins, being the causative factor. The weakly positive Wassermann, I do not consider of much importance, as the man has a negative history and no other evidence of luetic trouble. The important point in the case is that we had to deal not only with incompetent external veins, but with incompetency of the perforating veins, a condition, if not recognized, and dealt with, will cause you to have failures from operation. In order to properly appreciate just what we have to deal with, we must remember the anatomy of the venous system of the lower extremity. That we have two great systems of veins carrying the blood toward the heart. The external poorly supported by the skin and subcutaneous fat, the walls and valves of which must support a column of blood of considerable height, and which are subjected to the force consequent to the changes in intra-abdominal pressure. The internal system well supported by fascia and muscle, and the communicating veins passing through the fascia, connecting the two. In the latter, we have valves just as in the other which allows the blood to pass from the external system into the internal system. If the walls of the external system become damaged and the valves incompetent, we get a stasis of the blood in the leg, which is compensated for partly by the communicating veins which allows only of the blood passing into the internal system. If the process goes on, however, the valves in the communicating veins become incompetent and the safety device is lost. Your stasis is increased and you have two factors to deal with in curing your ulcers which are likely to form even before the second factor enters in. The degree of the involvement must be determined by the two tests mentioned in the physical examination. The Trendelenburg test determines the degree of competency of the valves of the external system. The constriction test, the degree of competency of the valves in the perforating system. Skin grafting is usually done by the Thiersch method and will save your patient much time in the hospital, as the ulcers are usually healed when he is ready to be discharged. The average time is about two weeks. I think these patients do just as well without any supporting bandages after healing has taken place.

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Local news of possible interest to the medical profession, notes on removals, changes in address, deaths and weddings will be gratefully received.

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EDITORIAL

CLOSING UP TIME FOR OUR ASSOCIATION

This year goes on record as our Association's most prosperous from every standpoint. While there was a slight decrease in 1916 over the 1915 membership, about thirty, due to increased charges incident to malpractice defense, the number is insignificant and as the good of that move is more fully appreciated, no doubt we will have a greater increase than ever on account of it. There is a general impression that malpractice suits have been somewhat decreased already and that they will be reduced to their proper minimum.

We call the attention of our members to the fact that membership expires automatically on December 31st and that a great service can be rendered the county secretaries by sending in checks for renewal without placing them to the trouble of hunting up each individual and collecting the amount. It should be remembered that this is everybody's business and cooperation in promptly remitting dues will save the individual secretary much unnecessary hard work. It should not be forgotten that January is a month of grace, that if dues are not paid before February 1st, the member would not be entitled to defense on any action the cause of which arose between January 1st and the time he was eventually placed in good standing.

Once more we urge every member to make of this matter good business by promptness on his part.

DISEASE PREVENTION DAY.

Governor Williams has designated December 10th as "Disease Prevention Day" and calls on the people of Oklahoma to observe the day in appropriate manner. This day falls on Sunday and within the week selected by the National Association for the Study and Control of Tuberculosis for a week of activity directed against tuberculosis. The Oklahoma branch of the Association through the Secretary, Dr. J. C. Mahr, has already called the attention of county societies to the date and suggested that organized effort be made in each county to place the matter of means for prevention before the people.

Each year this week and the spirit behind the movement will grow until the people will begin to appreciate that the control of tuberculosis lies in doing every-

thing needful toward prevention and what is equally important the early discovery of incipient cases in order that they may be properly treated in time to arrest or cure the disease.

INSULTING THE INTELLIGENCE.

The temper of medical men is sorely tried by direct statements, intimations and insinuations of Christian Science publications, Chiropractic advertisements and similar irresponsibles that outbreaks of contagious disease is caused by the greatly increased use of serums and vaceines by the profession. Nothing could be so contemptibly mean and have less basis for foundation than such statements. Unfortunately they may fall under the eye of some one soon to suffer in his own family from some contagion easily controlled by vaceination or antitoxin, who will be so impressed by the insinuation that they will refuse aid at a critical time and death may result to some helpless child who has no one to protect its rights except a deluded parent who has been led away by false statements. In this situation the physician is practically helpless. The state and National governments may destroy, isolate and vaccinate cattle and hogs to save low grade animal life, but they stop aghast at interfering with the "Constitutional" rights of the high grade human animal.

Attention has been called in these columns (August, 1916, page 251) to the irresponsible character of chiropractic statements. Christian Scientist statements are equally unreliable and untruthful. All of these cults in charging biologic inoculation with responsibility for spread of disease forget or never knew that epidemics now well controlled by such measures formerly occurred in greater severity than is now known before the use of biologic products was known. Intelligent men have no patience with their misstatements, but we should not overlook the capacity for mischief and grief in their deluded propaganda. Our legislators should have their attention ealled to specific instances of their knavery and foolishness, with the hope that their dangerous influence may be properly forestalled.

THE INDIAN NO LONGER A VANISHING RACE.

The U. S. Indian Service calls attention to an address by Dr. Lawrence W. White, Superintendent of a Wisconsin Indian Agency, delivered at the Lake Mohonk Conference. Congratulating the move taken to improve sanitary and health conditions among the Indians, who heretofore have been thought to be practically a disappearing race, the assertion is made that the Indian **was** disappearing, but that within the last few years there has been a remarkable improvement in the sanitary and hygienic conditions, that by personal supervision of nurses and physicians, who have been greatly increased, a practical educational campaign has begun to bear fruit in lessening infant mortality. Appropriations have slowly increased from \$40,000.00 in 1911 to \$350,000.00 for 1917, and it is proposed to greatly increase appropriations over that figure later on.

In Oklahoma the Commissioner of Indian Affairs has been especially active in increasing this activity and inspeetors, nurses and physicians have been supplied in inereasing number. The Choctaw Sanitarium at Talihina is completed and occupied. In this institution tuberculosis will be treated and it is hoped that success will attend it for the reason that it is established near their homes, not diffiult of access and free from the objection of expatriation so objectionable to these wards of the Government. Tuberculosis, especially fatal to the Indian, it is hoped will be discovered by systematic examinations and watchfulness early enough to reduce the mortality.

The activities do not stop with these endeavors but include hygienic instruction to mothers on the care of their children, the prevention and treatment of trachoma, and the improvement of sanitary conditions generally.

The total Indian population (1916) is placed at 209,224. Births 6,092; deaths 4,570; births over deaths 1,522.

CURRENT MEDICAL LITERATURE

CONDUCTED BY

DRS. L. F. WATSON AND L. J. MOORMAN, OKLAHOMA CITY,
AND FRED J. WILKIEMEYER, MUSKOGEE

THE TREATMENT OF THE FATTY CAPSULE AND THE URETER IN NEPHRECTOMY FOR RENAL TUBERCULOSIS.

Herman Louis Kretschmer, Chicago, in *Surgery, Gynecology and Obstetrics*, October, 1916, states that in a consideration of the surgical treatment of renal tuberculosis, two facts stand out prominently: (1) the present status of the question relative to the diagnosis and treatment of renal tuberculosis; (2) the fact that the management of the fatty capsule and the ureter has not been as definitely settled as has the former.

With reference to the first topic, I should like to refer to Cabot's introduction to a recent article on this subject, in which I think he sums up the question of diagnosis and treatment as well as it can be. "Though many points connected with the diagnosis and treatment of renal tuberculosis have been practically settled during the past ten years, much still remains to be done. In expert hands the questions of diagnosis have been well cleared up, and the formerly much discussed question of the advisability of surgical treatment has ceased to play an important part. The tendency to watchful waiting which was generally but another name for medical procrastination, has considerably abated, and there is practically no difference of opinion, among those qualified to express one, that in unilateral renal tuberculosis, operation offers the only chance of cure, and the so-called medical treatment only prolongs the agony."

L. F. Watson.

THE TREATMENT OF FRACTURES BY NAIL EXTENSION.

Frederick G. Dyas, Chicago, in *Surgery, Gynecology and Obstetrics*, October, 1916, states that the purpose of this paper is to make a preliminary report upon a series of cases treated by the nail extension known as Steinmann's method.

Conclusions: Advantages. (1) It is less dangerous than the radical open operation. (2) It enables the surgeon to exert the maximum amount of traction while using the minimum area for the attachment of the traction apparatus. (3) It will bring about a reduction of the deformity in old cases where other methods fail. (4) The technique is not difficult and can be mastered by anyone. Therefore, the method is practical and can be used by the entire profession. (5) It gives access to wounds in compound fractures, permits of frequent dressings, and does away with unclean, infected fixation apparatus.

Disadvantages. (1) Apparent brutality of the procedure. This is not real, however, as the patients suffer no more by this traction than by any other method. (2) Danger of infection. This is less than the danger of an open, radical operation. (3) Hemorrhage. This may occur but can always be readily controlled by enlarging the incision and tying off the bleeding point. L. F. Watson.

SOME OBSERVATIONS ON THE TEACHING OF SURGERY.

John Allan Wyeth, New York, in *The Journal of the American Medical Association*, August 19, 1916, states that every teacher recognizes the fact that success in the making of a surgeon depends, first of all, on the aptness of the pupil. It may be true that "poets are born, not made," but years of patient toil in training await the making of a surgeon. He must possess by nature those rare qualities which are essential to successful development. His must be a brain not only endowed with an extraordinary power of analysis, but equally gifted in construction. He must possess moral courage of the heroic type which recognizes in "duty" the sublimest word in our language, and physical courage which is not embarrassed by obstacles seemingly insurmountable, nor appalled, even in the presence of the Great Disaster.

Of the various problems in the development of our race to its fullest usefulness, the failure to appreciate the value of ambidexterity is to me the most inexplicable. Bimanual deftness developed in the forming, the growing period, not only adds to technical perfection, but beyond all doubt aids in the development of both halves of the brain, so that these two halves, equally well nourished and alert, work together as one organ, if I may employ a homely simile, like the two horses of a well trained and well matched team, thus assuring the complement of mental energy.

Physically, mentally and morally qualified, the embryo surgeon enters the laboratory, for on this foundation must rest the hope of efficiency. Only a thorough knowledge of the normal tissues can render possible the recognition of the many morbid changes which are characterized as disease. By the laboratory is implied not only microscopy and organic chemistry, but also normal and abnormal or morbid anatomy, and animal experimentation. In the mastery of regional anatomy, the employment of frozen sections is essential; and while the perfection of modern photography enables the student to preserve accurate pictures of the sections, nothing serves to fix the relations of the tissues in the mind so well as hand tracings on frosted glass, laid directly on the section.

While in the teaching of clinical surgery, some general idea of the technic may be obtained by observation, from points more or less removed, in the ordinary amphitheater, the practical knowledge which is absolutely essential can be acquired only by immediate personal contact.

L. F. Watson.

THE CHOICE AND TECHNIC OF THE ANESTHETIC.

Arthur Dean Bevan, Chicago, in *The Journal of the American Medical Association*, October 23, 1915, states that in making this analysis and in arriving at conclusions, we have been controlled by certain requirements: first, the safety of the patient; second, the comfort of the patient; third, the efficiency of the anesthetic agent; fourth, control, avoiding anesthetics which cannot be withdrawn with the first appearance of danger; fifth, the simplicity and general adaptability of the method; sixth, after-effects on blood tissues and viscera; seventh, complications, vomiting, etc., and eighth, effects on immunity against poor organisms, pneumococci, etc.

Conclusions. The final results of my analysis of the anesthetic problem are as follows: (1) Drop ether should be today chosen as the standard general anesthetic when a prolonged anesthetic is desired with relaxation and unconsciousness. (2) Intrapharyngeal ether should be chosen in mouth and jaw cases when it is desirable to remove the anesthetist and the anesthetic apparatus out of the operative field. (3) Gas should be chosen in short anesthetics in which unconsciousness is desired, and in special cases, such as kidney insufficiency. (4) Local infiltration anesthesia should be chosen when the surgeon has the full cooperation of the patient and when the field of operation can be completely infiltrated and anesthetized by a safe amount of novocain and epinephrin.

These four simple and safe methods can be made to cover all surgical cases. This places anesthesia on a very unpretentious, simple basis, but here as in most fields of surgery, we finally learn that simplicity is near to truth.

L. F. Watson.

RELATIVE POTENCY AND USEFULNESS OF TINCTURE IODINE McDONALD'S SOLUTION

P. R. Stalnaker, Past Assistant Surgeon, U. S. N., has this to say of the two (*U. S. Naval Bulletin*, July, 1916):

McDonald's Solution.		Tincture of Iodin.	
Formula		Formula	
Pyxol.....	2 parts.	Iodin.....	7 per cent.
Acetone.....	40 parts.	Pot. iodid.....	5 per cent.
Alcohol.....	60 parts.	Alcohol.....	100 c. c.

Applied same as tincture of iodine.

Advantages and disadvantages

1. Disinfects quicker and better than tincture of iodine. Estimated as 20 times more efficient than phenol.
2. Does not injure metal instruments. Instruments can be left in this solution for weeks without injury or corrosion.
3. Costs much less than tincture of iodine.
4. Lesions heal more rapidly.
5. Ingredients readily procured in United States. The slogan "Made in America" is applicable here.
6. Does not injure the skin to apply watery solutions following applications.
7. Not necessary to protect serous covering, as peritoneum, following use.
8. Evaporates rapidly.
9. Does not injure skin.
10. Does not stain skin.
11. Equally inflammable.
12. Not as good a counterirritant.
13. Pleasant odor.
14. Feels cool to the skin surface.
15. Splendid to cleanse and cut greasy particles from dirty wounds.

Advantages and disadvantages

1. Is not as good a disinfectant as McDonald's solution.
2. Injures metal instruments.
3. Costs approximately 66 2-3 per cent more than McDonald's solution.
4. Lesions do not heal as rapidly.
5. Ingredients harder (since European war) to procure in United States. Foreign firms practically monopolize the trade.
6. Injures skin and causes desquamation if watery solutions follow use of tincture of iodine.
7. Is necessary to protect serous coverings following use.
8. Does not evaporate as rapidly.
9. Injures the skin.
10. Stains skin.
11. Equally inflammable.
12. Much better counterirritant.
13. Not a pleasant odor.
14. This cooling effect is not noted.
15. Action practically nil in this respect.

—*U. S. Naval Bulletin*, July, 1916.

Thompson.

THE SURGERY OF GLAUCOMA.

Emory Hill, Chicago, in *Surgery, Gynecology and Obstetrics*, October, 1916, states that, some historic perspective is essential to an understanding of the present enthusiasm of ophthalmic surgeons in regard to glaucoma and the voluminous literature of the subject. No ophthalmic topic is more important and perplexing, and none lends itself more readily to argument. Wide diversity of opinion

must exist so long as several different types of eye diseases are included under one name, the etiology of certain types unknown, and many surgical procedures effective in selected cases and ineffective in others. Indeed, some phases of the glaucoma problem seem as far from solution today as in the remote past.

A discussion of the surgery of glaucoma at the present time must lack finality. The past decade has been fruitful of many ingenious attempts to solve the difficult problem of saving vision in a peculiarly baffling disease. Time will sift these operations, selecting the more effective and less dangerous ones for use chiefly in glaucoma simplex. Just now it is more important to study the problem with an open mind than to espouse the cause of any one operator or operation.

L. F. Watson.

PERSONAL AND GENERAL NEWS

Dr. P. G. Murray, Thomas, is visiting in Colorado.

Dr. C. M. Tracy, Woodward, has moved to Sentinel.

Dr. C. L. Hill, Haskell, visited Georgia in November.

Dr. W. M. Tucker, Sulphur, is doing special work in Chicago.

Dr. J. C. Matheney and family, Lindsay, are visiting in Tennessee.

Dr. O. S. Somerville, Bartlesville, visited West Virginia in November.

Dr. Geo. D. McLain, Oklahoma City, is doing special work in New York.

Dr. and Mrs. H. B. McKenzie, Enid, have returned from a visit to Tennessee.

Dr. H. D. Shankle, Afton, has sold his practice to Dr. John S. French of Tulsa.

Dr. A. S. Risser, Blackwell, is slowly recovering from a severe attack of typhoid fever.

Drs. C. M. Ament and L. R. Rutherford, Sapulpa, have returned from a hunting trip on the Texas-Mexican border.

Dr. J. P. Sudderth, Nowata, received a painful injury to the right hand recently when he was thrown from his horse.

Dr. Geo. C. Campbell, Anadarko, is preparing to move to Sand Springs, where he will be connected with the Page Hospital.

Dr. Roy Webb, Assistant Health Officer, Oklahoma City, complains that cases of tuberculosis are not being reported in that city.

Dr. C. W. Tedrowe, of Elk City, has moved to Woodward, where he has purchased the Woodward Hospital from Dr. C. M. Tracy.

Dr. and Mrs. Chas. E. Barker, Oklahoma City, have returned from New Orleans, where Dr. Barker did special work in Tulane University.

Dr. Walter Hardy, Ardmore, is erecting a \$50,000 annex to the Hardy hospital. Mr. Robt. Wachtorn, it is said, donated the institution a large sum of money.

Misses Kathleen and Helena Swyny, registered nurses, Oklahoma City, announce the opening of a private maternity sanitarium at 947 West 13th Street, Oklahoma City.

Drs. D. M. Randel and A. W. Everly, Muskogee, who recently had a mal-practice suit against them dismissed, must reanswer, a new trial having been granted the plaintiffs.

"**Doctor**" **John C. Hubbard**, a member of the chiropractic fraternity, announces that those worthies will again attempt to have the coming legislature create a state board of chiropractics.

Dr. Thos. E. Sheppard, Tulsa, defendant in \$50,000 mal-practice suit by reason of alleged negligence in the administration of chloroform, lost the case, the jury awarding the plaintiff \$2,000 damages.

Dr. V. M. Reynolds, Bristow, has been appointed County Health Officer of Creek County, to fill the vacancy caused by the resignation of Dr. E. W. Reynolds who has joined the medical department of the army.

Dr. Price Patterson, Pauls Valley, was instantly killed by Wade Williams, October 29; it is said due to domestic affairs. By a strange coincidence, Dr. Patterson was killed on the same spot where several years ago he killed a Dr. Herrod.

Northeastern District Medical Society met in Claremore November 9. Dr. J. G. Waldrop, Claremore, delivered the address of welcome which was responded to by Dr. W. Forrest Dutton, Tulsa. Physicians from over the district generally attended.

National Medical Examination Day has been urged by the National Association, and December 6th set aside as the day. The object of the examination is to have everyone, whether sick or well, undergo an examination on that day in the hope that early cases may be discovered.

Eugene Brieux, the well known French writer on social questions, proposes the establishment of an official matrimonial agency in France in order to bring eligibles together. Brieux suggests the abolition of the marriage contract and the dower, the great barrier to the marriage of girls without funds.

Drs. L. Haynes Buxton, Oklahoma City; F. B. Fite, Muskogee; T. J. Horseley, Mangum; J. H. Barnes, Enid; L. J. Moorman, Oklahoma City, and Harper Wright, Grandfield, attended the Atlanta meeting of the Southern Medical Association. Dr. Buxton read a paper on "Orbital Teratoma," the

discussion being opened by Dr. Barnes. Dr. Moorman was on the program for a discussion in the Symposium on Tuberculosis.

The Graduate Nurses of Oklahoma met in Muskogee, October 25-26. Miss Rose Walker, El Reno, was reelected President; Miss Vena Wood, Muskogee, Secretary; Miss Mary Parker, Oklahoma City, Treasurer. The censors are Miss Bess Ross and Miss Rozelle Dunning, Enid; and Miss Bailey, Guthrie. Miss Charlotte Huggins, Muskogee, was elected delegate to the National Convention. A buffet luncheon was tendered the organization by the Muskogee physicians.

Dr. S. Adolphus Knoph, New York, is the latest exponent for repeal of federal and state laws prohibiting circulation of information as to birth control. He suggests the establishment of free clinics that would be competent to give information as to birth limitation where deemed advisable. He says: "Judicious birth control is not race suicide but race preservation"; that with the increase in family there is rarely a corresponding increase in earning and as a result, malnutrition and insufficient clothing enter as factors to predispose to tuberculosis and other diseases. Fifty thousand children die annually from tuberculosis in the United States. Mortality and morbidity from this disease is highest among the poor, where the number of children is greatest.

The Oklahoma Association of Health Officers met in Guthrie November 16. Dr. J. W. Duke, State Commissioner, called the meeting to order and the election of officers was carried out. Dr. G. W. Stewart, Hobart, was elected president; Drs. C. A. Thompson, Muskogee, L. T. Lancaster, Cherokee, and H. P. Wilson, Wynnewood, vice-presidents; Dr. L. E. Emanuel, Chickasha, secretary-treasurer. Next meeting place Oklahoma City, on call of the officers. Dr. Elizabeth Chamberlain of the health department addressed the meeting on the technique of securing and forwarding tissue, water and similar specimens. Dr. C. A. Thompson read a paper on "Gonorrhoea and the Student". Dr. A. E. Davenport, on "A Few Pre-requisites for Success as a Health Officer"; Dr. R. E. Andrew, chemist of the department, on "Water Supplies, Infection and Treatment"; Dr. C. S. Petty on "Acute Infections"; Dr. J. W. Duke read the "Model Vital Statistics Law" and discussed phases of its possible application to Oklahoma. The visiting physicians, thirty-three in number, and the staff of the health department were tendered a luncheon at the Hotel Ione by Dr. Duke.

CORRESPONDENCE AND MISCELLANEOUS

NEW HEAD FOR FRANK S. BETZ COMPANY.

Mr. Louis R. Curtis, formerly of St. Luke's Hospital, Elected President of Well Known Surgical Instrument House.

Considerable interest has been aroused in medical circles by the announcement of the election of Mr. Louis R. Curtis, for 18 years Superintendent and Secretary of St. Luke's Hospital, Chicago, as president of that institution.

Mr. Curtis was born in 1865 in Philadelphia. He obtained his college training at Stevens, graduating as Mechanical Engineer. In 1889 he entered the hospital field as Assistant Superintendent of the New York Hospital. During that period he attended medical college, not with an idea of practicing, but to better fit himself for his hospital work. From the New York Hospital, Mr. Curtis went to the General Hospital of Elizabeth, New Jersey, staying there for about one and one-half years. From there he came to St. Luke's Hospital, Chicago, as Superintendent and has been the dominating figure in that Institution, both as Superintendent and Secretary, until recently, and is now Vice-President in charge of the operation of the institution. During the last years Mr. Curtis has been prominent as a consulting engineer, especially among hospitals, and has introduced many advanced and successful ideas in hospital construction and organization. His wide experience among hospitals and medical men, coupled with his technical training, makes him peculiarly well fitted for his new position.

Mr. Frank S. Betz, under whose control the concern bearing his name assumed its present proportions, will continue with the company as Chairman of the Board of Directors and give the organization the benefits of his long experience and training. His many and diversified interests are given as reasons for his retiring as active head of the Company.

AMERICAN HEALTH RESORTS NOW POPULAR.

The European war, which has so profoundly affected our industries, has had a considerable influence in increasing the patronage of American health resorts. Many Americans who usually go to foreign spas, have visited home institutions instead. Furthermore, numerous residents of other neutral countries have come to the United States in search of health, who would in other conditions have gone to Carlsbad, Homburg or the hundred other health headquarters of Europe. This is particularly true of wealthy residents of Central and South America. In the last year the Battle Creek Sanitarium has had about 200 patients from abroad. The number will probably increase, for in the last three months the institution has had letters of inquiry from prospective visitors residing in the following lands: Cuba, Caiman Islands, Mexico, San Salvador, British Guiana, Venezuela, Colombia, the Argentine, Uruguay, Peru, Honduras, Italy, Switzerland, Russia, England, Germany, India, Japan, the Belgian Congo and Australia.

FROM THE STATE BOARD OF HEALTH, GUTHRIE, OKLAHOMA.

DR. JOHN W. DUKE, COMMISSIONER.

Treatment of Cancer.

While cancer does not take the death and sickness toll of tuberculosis, the number of cases throughout the country as a whole, the suffering involved, the apparent hopelessness of the fight in so many cases, have combined greatly to increase in recent years interest in the disease both with the medical profession and with the public in general.

It is generally assumed that cancer is increasing at a markedly rapid rate. This may be true, but it is far from being absolutely proven. In this country the most important source for information on this point, of course, is the statistics compiled under the direction of the Federal Health Service. As a matter of fact these figures show so marked increase that they seem too large to be true. In the ten-year period from 1900 to 1910, according to these statistics, there was an increase of 30 per cent in the male cancer rate and of 22 per cent in the female cancer rate at all ages beginning with the age of 25 in the states included in the registration area in 1900. At certain age periods this increase was very considerable—as much as 40 per cent.

When it is remembered that cancer is a disease of long standing in our civilization, the accuracy of such figures appears in doubt. By projecting such increases in the rates forward or backward a few generations, it would seem that if cancer were capable of increasing at such a rate, it would either have been a negligible disease in the past or would seriously threaten in the near future the existence of the race. It is of course possible that changing conditions in our mode of life or of modern civilization might operate in some mysterious manner to increase the rate, but even making such an allowance, the increase stated seems larger than justified by actual facts.

In seeking an explanation for the apparent increasing rates, we must consider first the marked improvement of registration in general in this country during the last fifteen years, and second, the greater accuracy in the diagnosis of cancer by physicians which has resulted from the increase in the number of operations and laboratory examinations, as well as general research work. Under present registration conditions in this country it will be necessary to wait some years before we can be positive on the question. In fact there are certain indications that in some communities, at least, the cancer rate has reached its highest point and is beginning to decline.

Nevertheless it is a sad and undeniable fact that the death list from cancer is far too high. It will be a great step in advance if this rate can be reduced. For the accomplishment of this end two lines of effort are indicated. The first is to reduce by means already at hand the suffering and premature death of cancer patients. At present the greatest promise of success along this line is held out by the surgeon. Cancer "cures" have been found of little or no value; they delude the suffering with false hopes. Taking all forms of cancer the average duration from the first observable symptoms to death is about two years. On the other hand the records of surgical operations indicate a marked extension of life for patients. While no absolute figures can be quoted it seems that an expansion of life from about three to five years is gained for about half the cases, much depending on the timeliness of the operation.

The second line of effort lies in investigating into the basic conditions of cancer—the etiology of the disease, measure of relief, effect of inheritance and method of dissemination. Something has been done along these lines, the problem is one which is being studied in this and other countries, but it must be admitted that many phases of it are still unsolved, that much remains to be done before even a partial victory over the menace of cancer can be rightly claimed.

Tuberculosis.

Tuberculosis is an ever present evil in this country. To be sure the toll annually taken by this disease has been greatly reduced during the past two decades. Yet it still is not only a terribly high toll, but an unnecessarily high one. Medicines can do little in tuberculosis; physicians can do something, but what is especially needed is for the people themselves, first to take the proper precautions against the onset of the disease, and second, to take in time the right measures to combat tuberculosis, once it has gained a foothold. For tuberculosis is a disease which can be cured. To effect a cure however, it not only is necessary to follow the right course, but to adopt that course before it is too late. Time is one of the most important factors in the fight.

How Infection is Spread.

It has been conclusively proven that there is absolutely no basis for the old belief, once so wide spread, that tuberculosis is an hereditary disease. It does not "run in certain families", as once supposed. The reason why it appeared to was because persons belonging to the same family as a tubercular person were more exposed to infection. Tuberculosis is a germ disease and practically the only way in which it is transmitted is from person to person. This does not mean that the person afflicted with tuberculosis, especially in its milder forms, should be shunned. It does mean that in simple justice to others he should observe precautions. The most important of these are:

A patient should not breathe, sneeze or cough in the face or even the direction of another person.

Great care should be used in destroying promptly the sputum and nasal secretions of a tubercular. They are among the most dangerous sources of infection.

Nobody should expectorate on the sidewalk or in other public places—a person with tuberculosis should be especially careful not to.

A tubercular person should not sleep with other persons and in the case of children, great care should be used to see that they do not use the same handkerchief or other articles.

Tubercular Remedies.

Where tuberculosis has set in, it should be remembered that the effective remedies are those of Nature. Medicine is of little value. Especially useless are practically all the "tuberculosis cures" so extensively advertised. Some of them are positively harmful, containing alcohol, opium compounds or other drugs. The best that can be hoped from them is that they will do neither good nor harm, beyond the harm of wasting the patient's money and giving him false hopes.

Fresh air, sunshine, proper exercise, plenty of nourishing food and freedom from worry are the best remedies for tuberculosis. The tubercular patient should sleep out of doors and be in the fresh air as much as possible. It is a great mistake to sleep out of doors, as in a sleeping porch, during the warm weather and then change to indoors when it begins to get cold. In this way the benefit gained during the summer often is lost and the patient faces the spring weaker than in the preceding year.

Steaks, eggs, milk and cream should be eaten in large quantities. In fact the patient should endeavor to increase the amount of nutritious food, thus enriching the blood as well as building up the system in general. The mental attitude of the patient is important. A patient should remember that with proper treatment there is real ground for hope and that worry and pessimism simply decrease the chances for complete recovery.

PROPAGANDA FOR REFORM.

Hydras.—The Council on Pharmacy and Chemistry reports that Hydras, sold by John Wyeth and Bro., is one of the so-called "uterine tonics", said to contain "cramp bark, helonias root, hydrastis, seutellaria, dogwood and aromatics" in unspecified amounts. While the name, taken in connection with the composition, suggests that hydrastis is an important constituent, the A.M.A. Chemical Laboratory found this drug to be present in unimportant amounts. The Council finds Hydras inadmissible to New and Nonofficial Remedies because its composition is semi-secret; because the recommendations on the label for its use in specified diseases, and the advertising accompanying the bottle are sure to lead to its ill-advised use by the public; because the claims made for its curative properties are exaggerated and unwarranted; because the name is misleading and because the combination of these five drugs, even if individually they were of therapeutic value, is irrational (*Journal A. M. A.*, October 7, 1916, p. 1107).

Nuxated Iron.—Nuxated Iron is advertised in newspapers with the claim that it is not a patent medicine or secret remedy. In the popular meaning of the words, "Nuxated Iron" is just as much a "patent medicine" as is "Peruna", "Lydia Pinkham's" or "Pierce's Favorite Prescription". Also, "Nuxated Iron" is essentially secret in composition. While the public is led to believe that the preparation consists chiefly of nux vomica and iron, analysis made in the A.M.A. Chemical Laboratory and elsewhere indicate that it contains much less than an ordinary dose of iron and practically no nux vomica. It is sold under claims that are both directly and inferentially false and misleading not only as regards its composition but also as regards its alleged therapeutic effects. Nuxated Iron is also advertised in the Medical Brief, a publication which has for its editor the "medical expert" for the Wine of Cardui concern in the recent case against the American Medical Association and as its publisher one who, through the "National Druggist", has long been the mouthpiece of the "patent medicine" interests, (*Journal A. M. A.*, October 21, 1916, p. 1244).

Patent Medicine Prosecuted Under the Food and Drugs Act.—The following information was brought out in connection with prosecutions by the federal authorities under that portion of the Food and Drugs Act, which provides penalties against misleading, false and unwarranted therapeutic claims; Rayway's Ready Relief was claimed to relieve rheumatism, sore throat, pleurisy, pneumonia and other conditions. The government chemists found the preparation to be a hydro-alcoholic solution of oleoresin of capsicum, camphor and ammonia. Ingham's Vegetable Expectorant Nerve Pain Extractor was found to contain alcohol 86 per cent., opium alkaloids, camphor, capsicum and vegetable extractive matter. It was claimed that this morphine mixture was not only safe and harmless, but positively beneficial when given to teething children. Tetterine was said to be a marvelous remedy for teeth, eczema, etc. Maignen Antiseptic Powder according to the government chemists is composed essentially of calcium carbonate, borax, aluminum sulphate and sodium carbonate. Among other things the exploiters of this powder, which at one time was advertised to the medical profession, tried to persuade the public that the preparation would "sterilize" the stomach, throat, nose, lungs, etc. Green Mountain Oil or Magic Pain Destroyer was found to consist essentially of 95 per cent. linseed oil, with oil of sassafras, oil of thuja, and oil of turpentine, with possibly small amounts of camphor. According to the claims made on the trade package, this stuff was said to be "A Remedy for Diphtheria, Croup, Deafness and Sore Eyes, Rheumatic Pains, Stiff Joints, Pains in the Back" and many other ailments. Mrs. Joe Person's Remedy was found to be a slightly sweetened water-alcohol solution of vegetable drugs with a minute trace of alkaloids and the presence of podophyllin and sarsaparilla indicated. The preparation was claimed to cure such things as "blood poison", eczema, malaria and pellagra. Tutt's Pills were found to consist mainly of sugar, aloes, starch and calomel. The nostrum was sold under claims to the effect that it was "a remedy for intermittent and remittent fevers, dropsy, dysentery, diseases of the kidneys and bladder", and a number of other conditions. (*Journal A.M.A.*, Oct. 28, 1916, p. 1316-17).

REPORT OF STATE BOARD EXAMINATION

October 10-11, 1916.

EXAMINATION.

Walter Simmons Chester	Benton, Ky.	Licensed
Luther O. Rodgers	Guthrie, Okla.	Licensed
Otto I. Green	Enid, Okla.	Licensed
Thomas J. Kemp	Washington, D. C.	Licensed
Chas. R. Morrison	Red Oak, Okla.	Licensed
Orville Jackson Walker	Oklahoma City, Okla.	Licensed
Henry Silas Browne	Tulsa, Okla.	Licensed
David D. Paulus	Oklahoma City, Okla.	Licensed
George Ulrich Huber	Coffeyville, Kas.	Licensed
J. E. Childers	Tipton, Okla.	Licensed
Wm. L. Hall	Red Oak, Texas	Licensed
Harry Dillman Boswell	Henryetta, Okla.	Licensed
Jas. Ernest Dorsett	Dallas, Texas	Licensed
William Kelly	Terlton, Okla.	Licensed
J. Wm. Mehaffey	Oklahoma City, Okla.	Licensed
Kenneth J. Wilson	Spencer, Okla.	Licensed

RECIPROCITY.

Eugene Banks Pendleton	Nowata, Okla.	Kentucky
Jno. Franklin Gorrell	Philadelphia, Pa.	West Virginia
Jackson Smitherman	Nashville, Tenn.	Tennessee
Joel Samuels Hooper	Navasota, Texas.	Texas
Roy Daniels Stone	Cartersville, Ga.	Georgia
Walter E. Koppenbrink	Bartlesville, Okla.	Missouri
Wallis Sterling Ivy	Marlow, Okla.	Mississippi
John M. Fewkes	Henryetta, Okla.	Arkansas
Wm. Gabriel Choate	Hot Springs, Ark.	Arkansas
George Tye Corum	Stroud, Okla.	Kentucky
Helen G. Colby Bond	Dewey, Okla.	Kansas
Emmett Merrick Morrison	Fork Ridge, Tenn.	Tennessee
Clifton M. Levy	Owensboro, Ky.	Kentucky
Horace Porter Routh	Hartford, Ark.	Arkansas
Jesse B. Lampton	Chickasha, Okla.	Kentucky
George W. Hinchee	Oklahoma City, Okla.	Arkansas

RE-REGISTRATION.

John J. Gill	Lamasco, Texas
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RALPH V. SMITH, Secretary.

NEW BOOKS

The Clinics of John B. Murphy, M. D., at Mercy Hospital, Chicago, Volume V., Number 4 (August, 1916). Octavo of 222 pages, 59 illustrations. Philadelphia and London: W. B. Saunders Company, 1916. Published bi-monthly. Price per year: Paper, \$8.00; Cloth, \$12.00.

A clinic on melanotic neoplasm in the digastric muscle, gives the reader an idea of the possible injury incident to chiropractic treatment or interference by trauma. The issue contains a goodly amount of bone work, among which is noted the Albee operation for fixation in tuberculosis of the spine. Fractures of the humerus are largely dealt with as are elbow injuries, tuberculosis of the elbow and various nerve lesions.

A series of sixteen pictures clearly illustrate various phases of gall-duct and bladder surgery, significance of pain, temperature and other symptoms to such an extent that the student and physician not often given opportunity to treat such cases may well devote hours and days to study, reflection and deduction from them.

The Clinics of John B. Murphy, M. D., Volume V., Number 5 (October, 1916). Illustrated, Philadelphia and London: W. B. Saunders Company, 1916. Published bi-monthly. Price per year: Paper, \$8.00; Cloth, \$12.00.

The first article in this "Clinic", that on Varicose Veins and Varicose Leg Ulcers, is extremely interesting and points out very clearly the various changes which take place in the venous circulation in this condition. It also brings out many points regarding varicosity which have been elucidated within the last year or two.

The clinic held by Dr. Murphy and undoubtedly among the last over which this estimable surgeon presided, was that given for the B. & O. surgeons. Many interesting cases were presented at this clinic.

The article on Prostatic Hypertrophy, showing cut of Bremermay's apparatus for the supra pubic drain, is of much value.

This volume also contains many other clinical case reports.

J. H. W.

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